

27128

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

November 18, 1992

Mr. Craig Benedikt
NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta, Georgia 30365

DATE REPORT ACCEPTED Jan. 11, 1993
DISPOSITION SEA (No Further Action)
SAM SIGNATURE Craig A. Benedikt

RE: Site Inspection
Sybron Arden NCD 002 221 703
Arden, Buncombe County, North Carolina

Dear Mr. Benedikt:

Enclosed herewith is the Site Inspection (SI) by Greenhorne and O'Mara, Inc. for Sybron Arden, (NCD 002 221 703).

The NC Superfund Section is recommending that the site be given a Site Evaluation Accomplished (SEA) status.

If you have any questions, please contact me at (919) 733-2801.

Sincerely,

Harry Zinn
Environmental Engineer
Contracts Management Branch
NC Superfund Section

HZ\gj

Enclosure

cc: Dexter Matthews
file

DATE REPORT ACCEPTED Jan. 11, 1993
DISPOSITION SEA (No Further Action)
SAM SIGNATURE Craig A. Beresch

SITE INSPECTION
FOR
SYBRON ARDEN
ARDEN, BUNCOMBE COUNTY, NORTH CAROLINA
NCD 002 221 703

Submitted to:

State of North Carolina
Department of Environment, Health,
and Natural Resources
Division of Solid Waste Management
Superfund Section
Raleigh, North Carolina

Prepared By:

Greenhorne & O'Mara, Inc.

4101 Lake Boone Trail
Raleigh, North Carolina 27607

March 1992

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	i
1.0 INTRODUCTION.....	1
1.1 OBJECTIVES.....	1
1.2 SCOPE OF WORK.....	1
2.0 SITE CHARACTERIZATION.....	3
2.1 SITE LOCATION.....	3
2.2 SITE LAYOUT.....	3
2.3 SITE OWNERSHIP AND HISTORY OF USE.....	3
2.4 PROCESS AND WASTE DISPOSAL HISTORY.....	4
2.5 PERMITS AND REGULATORY HISTORY.....	5
2.6 REMEDIAL ACTIONS TO DATE.....	5
2.7 DESCRIPTION OF EARLY REPORTS.....	6
2.8 TRIP REPORT SUMMARY.....	6
3.0 ENVIRONMENTAL SETTING.....	8
3.1 TOPOGRAPHY.....	8
3.2 SURFACE WATER.....	8
3.2.1 Overland Drainage and Affected Water Bodies.....	8
3.2.2 Climatology.....	8
3.3 GROUNDWATER.....	8
3.3.1 Geology.....	8
3.3.2 Aquifer Use.....	9
3.3.3 Soils.....	9
3.4 POPULATION DISTRIBUTION.....	10
3.5 WATER SUPPLY.....	10
3.6 LAND USE.....	11
3.7 SENSITIVE ENVIRONMENTS.....	11
4.0 CONCLUSIONS AND RECOMMENDATIONS.....	12
REFERENCES	
APPENDIX A	MAPS, PHOTOGRAPHS AND TABLES
APPENDIX B	SITE INSPECTION FORM

EXECUTIVE SUMMARY

Sybron Arden is a 30-acre site located in the Town of Arden, Buncombe County, North Carolina. Taylor Instruments built the facility in 1964 and began operations that same year. The property was vacant farmland prior to 1964. Taylor Instruments manufactured medical and scientific instruments, which included; thermometers, hydrometers, wind scopes, stethoscopes, blood pressure gauges and cups. In June 1971, Taylor Instruments disposed of approximately 14 drums of crushed thermometers containing mercury on site. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee. Sybron Corporation (Sybron Arden) bought Taylor Instruments in 1974. On December 12, 1986, Sybron filed a 103(c) notification with the North Carolina Solid and Hazardous Waste Management Branch acknowledging the on-site hazardous waste disposal area. Sybron decided to do a voluntary cleanup of the disposal area, under the guidance of the North Carolina Solid and Hazardous Waste Management Branch. On July 28, 1983, a spill was noticed during a RCRA compliance inspection of the facility. The spill was located on the ground near the hazardous waste storage area. Samples of the liquid were collected and submitted to the North Carolina Laboratory of Public Health. Laboratory analysis of the liquid revealed high levels of chromium and lead. According to North Carolina Solid and Hazardous Waste Management Branch files the spill was cleaned up properly. In July 1987, the Sybron facility was sold to Day International of Waynesville, North Carolina. Day International is a manufacturer of rubber blankets for the printing industry and rubber rolls for the textile industry. In January 1989, while removing a wall from the former mercury fill room, a small amount of mercury was found on the floor, in the wall, and in the soil beneath the floor. A coordinated clean up was conducted by Day International and the North Carolina Solid and Hazardous Waste Management Branch in May 1989.

The Sybron Arden site is located within the Blue Ridge Physiographic Province and is further characterized as Muscovite-Biotite Gneiss unit and Metagraywacke unit of the Ashe Metamorphic Suite. The Muscovite-Biotite Gneiss is a very heterogeneous unit dominated by a thick sequence of marine clastic metasedimentary rock. The Metagraywacke unit underlies the very rugged terrain associated with the Black Mountains. High quartz content, massive appearance, and sedimentary mature characterized this unit. Metagraywacke is a competent, highly resistant rock. Most residents living within 4 miles of the Sybron Arden site are connected to either the Asheville-Buncombe County Water District, Hendersonville Water System, or private wells. The Asheville-Buncombe County Water System draws its water from two reservoirs, the Beetree and North Fork. The Hendersonville water system obtains its water from Bradley Creek in the Pisgah National Forest. The remaining residents not served by these municipal water supply systems rely on private groundwater wells for their drinking water supply. Most of the groundwater is obtained from secondary rock openings. These secondary openings include: joints, fractures, cleavage planes, planes of schistosity, bedding planes, and solution channels. Wells used in the area are drilled into unweathered bedrock. These wells are drilled until an acceptable supply of water is obtained.

The Sybron Arden Site is not considered a threat to the environment and public health. Based upon a site inspection conducted on December 7,

1992 and information available at this time. G&O is recommending that the site be designated for no further action, under the Federal Superfund program at this time.

1.0 INTRODUCTION

1.1 OBJECTIVES

Greenhorne & O'Mara, Incorporated (G&O) is currently conducting the initial phase of the Site Inspection (SI) at Sybron Arden Site located South of Asheville in Buncombe County, North Carolina. The overall objective of the SI is to provide information to support the recommendation that the site should move onto the next stage of the pre-remedial process or be designated as "no further remedial action planned (NFRAP)" under the Federal Superfund program. Additional objectives of the SI are the following:

- Identify the types of contaminants present.
- Assess whether a release of hazardous substances has occurred.
- Search for evidence of actual human and environmental exposure to contaminants.
- Determine the likelihood of the site scoring high enough on the revised Hazardous Ranking System (HRS) to be recommended for further pre-remedial action under the Federal Superfund program.

The SI builds upon data obtained during the Preliminary Assessment (PA) to further characterize problems on or near the site and to support a management recommendation.

1.2 SCOPE OF WORK

The scope of work for this site includes the following tasks:

- Conduct a site inspection in conjunction with personnel from the North Carolina Department of Health, and Natural Resources Superfund Section to characterized physical features regarding the use, storage, generation, and disposal of hazardous waste and materials.
- Investigate site history to determine prior ownership and use.
- Review site processes to historically determine the types of hazardous material used and waste produced.
- Review EPA and state file material regarding permits and regulatory history.

- Describe the findings, evaluations, conclusions, and recommendations of any early reports.
- Develop environmental settings in the vicinity of the site by characterizing overland drainage and affected water bodies, climatology, groundwater, and soils.
- Calculate total population within four miles of the site and determine the population that relies on groundwater, from sources lying within four miles of the site, for their drinking water supply.
- Prepare a SI report that presents information gathered. Discuss and evaluate the findings, prepare conclusions as to whether a release of hazardous waste had occurred, and present recommendations. Any existing data gaps will be discussed in the text. **Greenhorne & O'Mara was not contracted to collect all of the data necessary to prepare a full and complete HRS scoring package.**

2.0 SITE CHARACTERIZATION

2.1 SITE LOCATION

Sybron Arden is located on Glen Bridge Road just off State Route (SR) 25, approximately 8 miles south of Asheville, in the Town of Arden, Buncombe County, North Carolina (Appendix A, Figure 1). The site can be located on the Skyland North Carolina USGS 7.5' Quadrangle Map at latitude 35° 27' 45"N and longitude 082° 31' 16"W (Refs. 5,11).

2.2 SITE LAYOUT

Sybron Arden is located on a 30-acre site and has a 240,000 square foot manufacturing facility. The facility is divided into four different areas where the following items are manufactured: rubber blankets for the printing industry; rubber rollers, cots, and aprons for the textile industry; urethane products, (i.e. cutting boards); and rubber printing rollers used in marking lumber and plywood (Refs. 13,18). There are several outside structures that are situated inside the security fencing that encloses the facility including, a hazardous waste storage area; a diked area for the bulk storage of liquid chemicals; a toluene recovery unit; diked fuel oil storage area; and several air scrubber units located around the facility (Ref. 13). Appendix A, Photo Set A shows the aforementioned areas in detail.

2.3 SITE OWNERSHIP AND HISTORY OF USE

The Sybron Arden site is located in the Town of Arden, Buncombe County, North Carolina. Taylor Instruments built the facility in 1964 and began operations that same year. Prior to 1964 the property was vacant farmland.

Taylor Instruments manufactured medical and scientific instruments, including, thermometers, hydrometers, wind scopes, stethoscopes, blood pressure gauges, and cups. In June 1971, Taylor Instruments disposed of approximately 14 drums of crushed thermometers containing mercury by burying them on site. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee (Ref. 2). In 1974, Sybron Corporation (Sybron Arden) bought Taylor Instruments. On December 12, 1986, Sybron filed a 103(c) notification with the North Carolina Solid and Hazardous Waste Management Branch acknowledging the on-site hazardous waste disposal area. Sybron Arden decided to do a voluntary cleanup of the disposal site, under the guidance of the North Carolina Solid and Hazardous Waste Management Branch (Ref. 1). Photo Set B, Appendix A, shows the process of cleanup of the on-site hazardous waste disposal area. Upon completion of the clean-up effort, the North Carolina Solid and Hazardous Waste Management Branch issued a letter stating that the clean-up was adequate (see section 2.6). In 1981, Ritter Dental, a subsidiary of Sybron, moved into the facility from Rochester, New York to manufacture dental chairs and X-ray equipment. No electro-plating took place since many of the parts were made from

stainless steel. This division of Sybron Corporation was phased out in 1983 (Ref. 13). On July 28, 1983, a spill was noticed during a RCRA compliance inspection of the facility. The spill was discovered on the ground near the hazardous waste storage area. Samples of the liquid were collected and submitted to the North Carolina Laboratory of Public Health. Laboratory analysis of that liquid revealed high levels of chromium and lead. According to North Carolina Solid and Hazardous Waste Management Branch files, the spill was cleaned up properly. There are no other records or indications that there have been other improper disposal or spills at the site (Ref. 1). In July 1987, the Sybron facility was sold to Day International of Waynesville, North Carolina. Day International manufactures rubber blankets for the printing industry and rubber rolls for the textile industry. In January 1989, while removing a wall from the former mercury fill room, mercury was found on the floor, in the wall, and in the soil beneath the floor (Ref. 3). A coordinated clean up was conducted by Day International and the North Carolina Solid and Hazardous Waste Management Branch in May 1989 (Ref. 6).

2.4 PROCESS AND WASTE DISPOSAL HISTORY

Taylor Instruments manufactured medical and scientific instruments that included thermometers, hydrometers, wind scopes, stethoscopes, blood pressure gauges, and cups. Sybron Corporation (Sybron Arden) purchased Taylor Instruments in 1974. Sybron Arden was listed as a hazardous waste generator under RCRA. The wastes the company generated were mainly organic wastes including: methylene chloride, 1,1,1-trichloroethane, lacquer thinner, acetone, xylene, and isopropanol. Waste mercury was also generated at the facility (Ref. 1). Day International bought Sybron Arden in 1987. Day International is a manufacturer of rubber blankets for the printing industry and rubber rolls for the textile industry. The rubber blankets are manufactured from a rubber-toluene based material. This material is applied to a cloth approximately 150 yards long and 90 inches wide. The rubber-toluene based material is applied to the cloth in several thin layers. Once the desired thickness is obtained, the blankets are hung, which allows the toluene to evaporate. The blankets are then rolled onto steel drums and placed into ovens for curing. After the blankets have cured, they are inspected, cut to size, and packaged for shipment (Ref. 13). The textile portion of the facility manufactures rubber-coated rollers that are used to preshrink cloth such as denim, cots and aprons used to spin yarn, and porous ink rollers used for marking lumber and plywood. These items are made from a rubber material which is extruded to shape. The material used on the rollers is relatively thin and long and is attached to steel roller surface. The cots and aprons are thick, short and fairly pliable. The ink rollers are thick, short and porous so ink can be applied to it (Ref. 13). Day International uses over 1,100 chemical compounds in their manufacturing processes. The majority of the compounds are powders and solids, but they also use solvents including Toluene, Heptane and Methyl Ethyl Ketone (MEK). These solvents, along with Recovered Toluene are stored outside in a diked area. The volumes of these solvents are as follows: Toluene-20,000 gallons, Recovered Toluene-4,000 gallons, Heptane-4,000 gallons and Methyl Ethyl Ketone-4,000 gallons. There is a 20,000 gallon #2 fuel oil tank located in its own diked area.

All waste solvents are stored on-site in a designated hazardous storage area and are recycled. The stillbottoms are periodically removed from the facility by Ecoflow of Greensboro, North Carolina. The majority of the solid wastes generated is rubber dust and trash which goes to a landfill. Also, Day International is considered a large quantity generator under RCRA (Ref. 13).

2.5 PERMITS AND REGULATORY HISTORY

Day International has 16 air permits; 8 for dust collectors, 4 for gas fired curing ovens, 3 for gas fired boilers, and 1 for the Toluene recovery system. Day International also has a permit to discharge industrial wastewater to the Metropolitan Sewerage District of Buncombe County, North Carolina. Day International is in the process of obtaining a storm water discharge permit (Refs. 13,18,21).

2.6 REMEDIAL ACTIONS TO DATE

In June 1971, Taylor Instruments, then a division of Sybron Corporation, buried approximately 14 drums of crushed thermometers containing mercury on site. The contents of the drums were emptied into a pit with the dimensions of 6'x 6'x 3.5'. This pit was located beneath a concrete sidewalk leading to the visitors entrance of the facility. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee (Ref. 2). Analytical results from soil samples collected from the disposal area confirmed the presence of mercury in the soil. On December 12, 1986, Sybron filed a 103(c) notification the North Carolina Solid and Hazardous Waste Management Branch acknowledging the on-site hazardous waste disposal area. Sybron decided to do a voluntary cleanup of the pit, under the guidance of the North Carolina Solid and Hazardous Waste Management Branch (Ref 1). Wastes disposed of in the pit were removed along with the concrete sidewalk and soil from the pit. The pit was excavated from its original size of 6'x 6'x 3.5' to 12'x 8'x 6' in an attempt to remove any mercury that may have leached into the surrounding soils. The soil and waste removed from the pit was manifested to Emelle, Alabama for disposal (Ref 4). Laboratory analysis indicated mercury contamination in excess of 0.002 ppm in a sample collected from the floor of the pit and two samples collected from the west wall of the pit. North Carolina Solid and Hazardous Waste Management Branch personnel recommended additional removal of soil from the floor and west wall of the pit. Sybron complied with the request. On June 9, 1987 the North Carolina Solid and Hazardous Waste Management Branch transmitted a letter to Sybron stating that the Branch felt that cleanup activities at the site were complete (Ref. 1). There are no other records or indications of other improper disposal at the site. There are records, however, indicating that there was a spill on site. The spill was noticed during a RCRA compliance inspection of the facility on July 28, 1983. The spill was discovered on the ground near the hazardous waste storage area. Samples of the liquid were collected and submitted to the North Carolina Laboratory of Public Health. Laboratory analysis of the liquid revealed high

concentrations of chromium and lead. According to North Carolina Solid and Hazardous Waste Management Branch files the spill was cleaned up properly.

In January 1989, while Day International was removing a wall from the former mercury fill room, a small amount of mercury was found on the floor, in the wall, and in the soil beneath the floor (Ref 3). A coordinated clean up was conducted by Day International and the North Carolina Solid and Hazardous Waste Management Branch in May 1989 (Ref 6). Approximately 16 drums of soil, 10 drums of wash water were removed during the mercury fill room clean-up.

2.7 DESCRIPTION OF EARLY REPORTS

The only written report describing the Sybron site was a Preliminary Assessment Report prepared in December 1987. The report primarily focused on the burial of the 14 drums of thermometers under the sidewalk near the visitors entrance. The report explained how the cleanup progressed and the results of the cleanup. The report also explained that Sybron Arden was a RCRA generator of hazardous waste and during a RCRA inspection a spill was located and analyzed. The results of the analysis indicated that the substance had high levels of chromium and lead. This spill was cleaned up under the guidance of the North Carolina Solid and Hazardous Waste Management Branch.

2.8 TRIP REPORT SUMMARY

On December 17, 1991 at 10:00, Mr. Christopher Huff and Ms. Helene Kasser of Greenhorne and O'Mara, Inc. (G&O) and Mr. Grover Nicholson from North Carolina Department of Environment, Health, and Natural Resources Superfund Section met with Mr. Bill Mincey, Plant Engineer, from Day International, Mr. Rudolph Gabel from Rudolph Gabel, Incorporated, former Director of Regulatory Compliance for Sybron Corporation, and Mr. Walt Probst, former employee of Sybron Corporation. The meeting commenced with an interview to obtain information about present and past history of the facility. Topics discussed, ranged from Day International processes, to the 14 drum burial of mercury under one of the sidewalks, to the mercury found in the walls of the old mercury fill room. After the interview a plant tour/inspection was conducted. The first area toured was the hazardous waste storage area, the bulk storage of raw materials. The hazardous waste storage area was paved, fenced, and surrounded by a berm; however it was not covered. All of the containers were sealed, intact and in good condition. The second area toured was the printing area of Day facility. In this area rubber blankets for the printing industry are manufactured. Here, the raw material are blended to form a specific compound and combined with a cloth to form the final product. The third area toured, was the textile portion of the facility, where rubber rollers used to preshrink cloth, and cots and aprons used to spin thread are manufactured. The tour began with the initial mixing of the raw compounds through final inspection of the product. The fourth area toured was where the urethane products are manufactured. The last area toured was where the porous ink rolls used to mark lumber, plywood, etc. are manufactured. This area was also the

location of the mercury fill room. After the tour was completed, an exit interview was held to answer questions raised during the tour. Upon leaving the site, Mr. Gabel led the group to the location where the 14 drums of thermometers had been buried under the sidewalk. The plant was in good shape, floors were clean and there were no signs of spills in the facility. A site reconnaissance was conducted to determine the approximate topography and drainage at the site, amount of vegetative cover, evidence of hazardous waste migration, and surrounding land use. The Asheville / Buncombe County waster department was also visited to obtain maps of the water supply system.

3.0 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY

The topography of the Sybron site is relatively flat around the manufacturing buildings but slopes east, towards U.S. 25. Elevations on the site range from approximately 2,270 feet National Geodetic Vertical Datum of 1929 (NGVD) around the buildings, to an average elevation of 2,200 feet NGVD along U.S. 25 (Figure 2A).

3.2 SURFACE WATER

3.2.1 Overland Drainage and Potentially Affected Water Bodies

The distance to the nearest downstream surface water body is approximately 250 feet. The change in elevation over this horizontal distance is approximately 35 feet; therefore, the slope of the intervening terrain is estimated to be 14%. This unnamed stream flows north approximately 1 mile to the Asheville steam plant cooling lake, Lake Julian. Another surface water body near the Sybron site is the French Broad River approximately 1.5 miles to the west. The French Broad River flows north towards Asheville. Approximately 14 miles down river, the Swannanoa River empties into the French Broad River. The river continues northwest into Tennessee and eventually empties into the Tennessee River (Ref. 11). There are no public water supply surface water intakes within 15 miles of the Sybron site. There are recreational activities along the French Broad River. Downstream of the site there is fishing, canoeing, kayaking, and white water rafting. Upstream there is canoeing, swimming, fishing, and kayaking (Refs. 19,20).

3.2.2 Climatology

Southern Buncombe County has a mean annual precipitation of approximately 48 inches and a mean annual lake evaporation of approximately 40 inches (Ref. 7). Therefore, the net annual precipitation is 8 inches. The 2-year, 24-hour rainfall in this area is approximately 3.25 inches (Ref. 8).

3.3 GROUNDWATER

3.3.1 Geology

The site is located within the Blue Ridge Physiographic Province and is further characterized as Muscovite-Biotite Gneiss unit and Metagraywacke unit of the Ashe Metamorphic Suite. The Muscovite-Biotite Gneiss is a very heterogeneous unit dominated by a thick sequence of marine clastic

metasedimentary rock. The protoliths are chiefly graywackes containing numerous shale partings and thicker shale beds and lenses. Interlard mafic rock consists of tholiitic basalts metamorphosed to amphibolite. The Muscovite-Biotite Gneiss unit is typically medium light gray to medium dark gray, fine to medium grained, thin to thick layered, and sulfidic. It is interlard and intergraded with mica schist and minor metagraywacke at all scales. The thicker and more graywacke-like layers are locally conglomeratic. Graphic schists are rare. Calc-silicate granofels are scattered through the gneiss unit and represent limy beds and lenses. Thin layers of amphibolite, derived from mafic volcanics, occur sporadically throughout the unit. This gneiss unit is competent and resistant to weathering. Those layers high in feldspar and mica content are more susceptible to weathering than those with a high quartz content (Ref. 9).

The Metagraywacke unit underlies the very rugged terrain associated with the Black Mountains. The Metagraywacke unit consists of medium-light-gray to medium-dark-gray, fine to coarse grained, massive to thinly layered, weakly foliated to well-foliated metagraywacke. The metagraywacke layers are interlaid and gradational with high-metamorphic grade, sulfidic metapelites, muscovite-biotite gneiss, and rare graphitic schists. Metagraywacke is locally conglomeratic. The quartz pebbles in the conglomerate are strongly deformed. High quartz content, massive appearance, and sedimentary mature characterized this unit. Metagraywacke is a competent, highly resistant rock.

3.3.2 Aquifer Use

Most rural and some suburban homes in Buncombe County depend on groundwater for domestic supplies. Groundwater occurs in primary and secondary rock openings. Openings that were formed the same time the rock was formed are considered primary. Secondary openings include: joints, fractures, cleavage planes, planes of schistosity, bedding planes, and solution channels formed after the rock was formed. Most of the groundwater used in the Buncombe County area comes from secondary openings. Springs are used where available, particularly in the hillier portions of the county. Most of the springs used for domestic purpose have yields on the order of 1 gallon per minute. Other sources of groundwater are obtained from dug and drilled wells. Dug wells have been used for many years, but are now being superseded by drilled wells. Most drilled wells in Buncombe County are drilled into unweathered bedrock. These wells are drilled into the rock until an acceptable supply of water is obtained or the well is abandoned. An inventory of wells in Buncombe County, circa 1970, indicates that wells have a average depth of 147 feet and a average yield of 10.3 gallons per minute (Ref. 15).

3.3.3 Soils

There are two predominate soils in the area of the Sybron Arden site. They are the Hayesville Series and the Tate Series. Typically, the Hayesville series consist of well drained soils on gently sloping to very steep ridges and side slopes in intermountain plateaus and valleys. This

series was formed in material weathered from felsic crystalline rocks such as granite, mica gneiss, and granodiorite. Typically, they have a brown loam surface layer 5 inches thick. The subsoil is red clay and clay loam, and yellowish red sandy clay to a depth of 48 inches. The substratum is fine sandy loam saprolite to a depth of 60 inches (Ref. 16). The Tate series consist of very deep, well drained, moderately permeable soils on beaches, fans and toe slopes in coves in the Southern Appalachian Mountains. The series was formed in alluvium and colluvium and derived from material weathered from felsic to mafic crystalline rocks such as granite, mica gneiss, hornblende gneiss, and schist. Typically the Tate series has a dark grayish brown loam at the surface 5 to 11 inches thick. The subsoil consist of a brown clay loam, yellowish brown clay loam, brownish yellow sandy clay loam, and a brownish yellow to light yellowish brown fine sandy loam to a depth of 72 inches (Ref. 16).

3.4 POPULATION DISTRIBUTION

To determine the population within unincorporated areas of Buncombe and Henderson Counties, a house count was conducted from the USGS quadrangle maps. The number of houses was then multiplied by 2.40 for Buncombe county and 2.38 for Henderson county, the 1990 Census average number of residents per household in the respective counties (Ref. 10). The number of residents within each radius ring was calculated and the values were added to provide a cumulative population. In addition, the 374 employees at the plant were added to the population values (Ref. 13). The table below summarizes the calculated total population (Ref. 14):

<u>Radius</u>	<u>Population/Radii</u>	<u>Cumulative Population</u>
On-site	374	374
1/4-mile	34	408
1/2-mile	185	593
1-mile	1106	1699
2-mile	2691	4390
3-mile	2641	7031
4-mile	2365	9396

3.5 WATER SUPPLY

Residents living within 4 miles of the Sybron Arden site obtain their drinking water from either the Asheville/Buncombe County Water District, Hendersonville Water System, or private wells. The Asheville/Buncombe County system draws its water from two reservoirs: Beetree and North Fork. The Hendersonville water system obtains its water from Bradley Creek and Mills River in the Pisgah National Forest. These two systems are connected in the Town of Fletcher. This connection is normally closed unless one system is in need of water from the other system. The water intakes for the aforementioned water systems are located well up stream of the Sybron Arden site. The Asheville/Buncombe County system encompasses the city of

Asheville and regions south of the city along U.S. 25 to the Town of Fletcher in Henderson County. As for the Hendersonville water system service area, only the area concern is the service area around the Town of Fletcher south along U.S. 25 to the Town of Naples. Residents living outside of these services areas rely on private wells for their drinking water supply. To determine the number of residents relying on private wells for drinking water, the number of homes for each distance ring lying outside the services areas were counted and multiplied by 2.40 for Buncombe County and 2.38 for Henderson County, the 1990 U.S. Census figure for residents per household in the respected counties. The table below summaries the calculations of residents living within 4 miles of the Sybron Arden site that depend upon groundwater as their source of drinking water (Refs. 13,17).

Population relying on groundwater for potable water

<u>Radius</u>	<u>Population/Radii</u>	<u>Cumulative Population</u>
On-site	0	0
1/4-mile	5	5
1/2-mile	12	17
1-mile	14	31
2-mile	163	194
3-mile	931	1125
4-mile	1275	2399

3.6 LAND USE

Land use in the vicinity of the site is largely agricultural and rural-residential with some industrial facilities. The closest cities are Asheville, located 8.25 miles north on U.S. 25 and Hendersonville located 13 miles south on U.S. 25 (Ref 11). The nearest residence is located less than 100 feet southwest of the facility and nearest school is 2 miles east of the facility. These distances were measured from the USGS Quadrangle map and visual interpretation during site visit (Ref 11).

3.7 SENSITIVE ENVIRONMENTS

There are no known critical habitats of federally-listed endangered species in the vicinity of the site. There are, however, several endangered and threatened species identified in the vicinity of the site including; the Indiana Bat, Bald Eagle, Arctic and American Peregrine Falcon, Carolina Northern Flying Squirrel, and Eastern Cougar (Ref.12). Do to limited documentation on wetlands it was not possible to identify these areas.

4.0 RECOMMENDATIONS AND CONCLUSIONS

The Sybron Arden site consists of a 240,000 square foot manufacturing facility located on a 30-acre site in Arden, Buncombe County, North Carolina. Since 1964 the facility has been owned by three different owners. The Sybron Arden Site is not considered a threat to the environment and public health. Based upon a site inspection conducted on December 7, 1992 and information available at this time, the following conclusions are made:

- Bulk solvents storage are stored in a fenced spill containment area which limits access to both the public and employees of the facility.
- The hazardous waste storage area was paved, fenced, and surrounded by a berm. All of the containers were sealed, intact and in good condition.
- Mercury pit and mercury fill room were cleaned up to the States satisfaction and the waste was disposed of at a certified landfill.
- The entire facility is fenced, thus limiting access to the public.
- Most of the residents within 4 miles of the site obtain drinking water from a municipal water system whose intakes are not threatened by site activities.

Based on the site inspection and review of current available information concerning the Sybron Arden site, G&O is recommending that the site be designated for no further action, under the Federal Superfund program at this time.

REFERENCES FOR SYBRON ARDEN
NCD 002 221 703

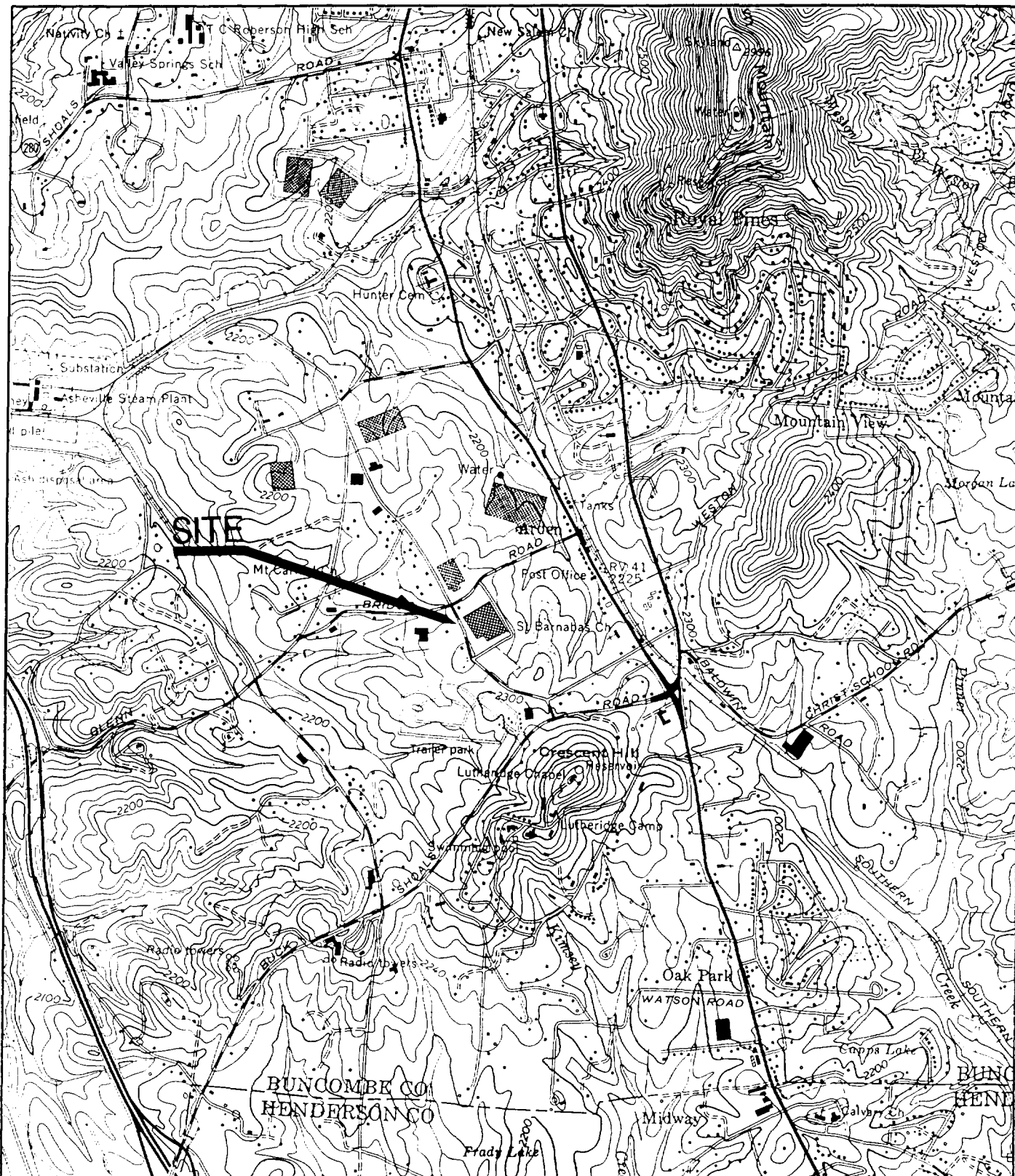
1. Sybron Arden, Arden, North Carolina, NCD002221703, Memo to State files from Cheryl McMorris, North Carolina Solid and Hazardous Waste Management Branch, Raleigh, North Carolina.
2. Letter from Rudolph Gabel, Rudolph Gabel, Incorporated, former Director of Regulatory Compliance for Sybron Corporation to Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, regarding information concerning the onsite burial of mercury at the Sybron Arden facility, February 6, 1992.
3. Memo to Lee Crosby, Superfund/Inactive Branch, from Douglas Holyfield, North Carolina Hazardous Waste Branch, January 19, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
4. Preliminary Assessment: Sybron Arden, Arden, North Carolina, NCD002221703, December 9, 1987. Cheryl McMorris, NC Solid and Hazardous Waste Management Branch, Raleigh, NC.
5. Potential Hazardous Waste Site Preliminary Assessment Form, October 6, 1987.
6. Letter to Dan Bumcom, Occupational Health Branch, Epidemiology Section, Douglas Holyfield, North Carolina Hazardous Waste Branch, May 31, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
7. Climatic Atlas of the United States, US Department of Commerce, National Climatic Center, Asheville, NC, 1979.
8. Rainfall Frequency Atlas of the United States, Technical Paper No. 40, US Department of Commerce, U.S. Government Printing Office, Washington, DC, 1963.
9. Preliminary Explanatory Text for the 1985 Geologic Map of North Carolina, November 4, 1988.
10. 1990 United States Census, North Carolina Section.
11. U.S Geological Survey, 7.5 minute series Topographic Quadrangle Maps of North Carolina: Asheville 1961, Skyland 1978, Fruitland 1978, and Oteen 1990.
12. U.S. Fish and Wildlife Service, Endangered and Threatened Species of the Southeastern United States, (Atlanta, Georgia, 1988).
13. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Helene Kasser, Greenhorne & O'Mara, December 17, 1991.

14. Christopher Huff, Greenhorne & O'Mara, Population calculations, Re: Sybron Arden, March 10, 1992.
15. Trapp, Henry, Geologist, U.S. Geological Survey and Department of the Interior, Geology and Ground Water in the Asheville Area, North Carolina, Bulletin Number 16, April 1970.
16. General Soil Maps of the Buncombe County, North Carolina, U.S. Department of Agriculture, Soil Conservation Service, Asheville, North Carolina.
17. Christopher Huff, Greenhorne & O'Mara, Calculation of population on groundwater, Re: Sybron Arden site, March 10, 1992.
18. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, December 17, 1991.
19. Christopher Huff, Greenhorne & O'Mara, Telephone conversation with Nick Clemmons from the State of North Carolina Wildlife Management. Uses of the French Broad River in Buncombe County January 14, 1992.
20. Information package on the French Broad River by The North Carolina Wildlife Resources Commission, Raleigh, North Carolina.
21. Permits from Day International, air and storm water.
22. Project report from Envirochem Environmental Services Inc., on mercury fill room cleanup done in January 1989.
23. U.S. Environmental Protection Agency, 1990. Hazard Ranking System; Final Rule. 55 FR 51532, December 14, 1990.
24. U.S. Environmental Protection Agency, 1991. Superfund Chemical Data Matrix (SCDM). Office of Solid Waste and Emergency Response. Directive 9345.1-13. Revised semi-annually.
25. Memo to Superfund Section from Hal Bryson, August 17, 1992. Update on status of Well Head Protection Programs in North Carolina.
26. Federal Emergency Management Agency, Flood Insurance Rate Map Buncombe County, North Carolina, Community-Panel Number 370031 0230B, revised August 1, 1980.
27. US Geological Survey Water Data Report NC-88-1. Water Resources Data, North Carolina, Water Year 1988.
28. Memo to File from Harry Zinn on November 6, 1992. Fisheries in the vicinity of Sybron Arden.
29. Letter to Doug Holyfield, DEHNR, Solid Waste Management Division, from Romie Herring, Division of Health Services, Occupational Health Branch, Industrial Hygiene Consultant, August 16, 1989. Presence of mercury vapor in the former mercury fill room.

30. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Ed Dzierzynski, Day International, November 28, 1989. Results of testing for mercury vapor in former mercury fill room.
31. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Robert Young, Day International, January 29, 1990. Results of testing for mercury vapor in former mercury fill room and intent to discontinue testing.

APPENDIX A

MAPS AND PHOTOGRAPHS



SYBRON ARDEN

NCD002221703

NOT TO SCALE

FIGURE 1



ENGINEERS-ARCHITECTS-PLANNERS-SCIENTISTS-SURVEYORS-PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.

900 EDMONSTON ROAD GREENBELT, MARYLAND 20770

13011 982-2800

ANNAPOLIS, MD - ATLANTA, GA - AURORA, CO - BALTIMORE, MD - CHARLOTTE, NC - CHICAGO, IL - COLUMBIA, SC - DALLAS, TX - DENVER, CO - FARMINGTON, CT - FREDERICKSBURG, VA - GREENBELT, MD - LEESBURG, VA - MANASSAS, VA - MIDDLETOWN, NJ - ORLANDO, FL - RALEIGH, NC - ROCKVILLE, MD - TAMPA, FL - WASHINGTON, DC - WEST PALM BEACH, FL

SITE LOCATION

OVERSIZED

DOCUMENT

PHOTO SET A

SITE INSPECTION

UNSCANNABLE

MEDIA

(PHOTOGRAPHS)

PHOTO SET B

HAZARDOUS WASTE DISPOSAL AREA

UNSCANNABLE

MEDIA

(PHOTOGRAPHS)

APPENDIX B

SITE INSPECTION FORM



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) SYBRON ARDEN		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 95 Glen Bridge Road			
03 CITY Arden	04 STATE NC	05 ZIP CODE 29704	06 COUNTY Buncombe	07 COUNTY CODE 11	08 CONG DIST 11
09 COORDINATES LATITUDE 35° 27' 45" - LONGITUDE 082° 31' 16" -		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A PRIVATE <input type="checkbox"/> B FEDERAL <input type="checkbox"/> C STATE <input type="checkbox"/> D COUNTY <input type="checkbox"/> E MUNICIPAL <input type="checkbox"/> F OTHER <input type="checkbox"/> G UNKNOWN			

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 12/17/91 MONTH DAY YEAR	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1964 Present BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <input checked="" type="checkbox"/> E. STATE <input checked="" type="checkbox"/> F. STATE CONTRACTOR Greenhorne & O'Mara <input type="checkbox"/> G. OTHER			

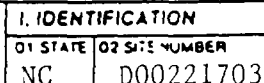
05 CHIEF INSPECTOR Helene Kasser	06 TITLE Environmental Scientist	07 ORGANIZATION Greenhorne & O'Mara, Inc.	08 TELEPHONE NO. (301) 982-2800
09 OTHER INSPECTORS Christopher Huff	10 TITLE Environmental Engineer	11 ORGANIZATION Greenhorne & O'Mara, Inc.	12 TELEPHONE NO. (919) 782-9088
Grover Nicholson	Environmental Engineer	NCDEHNR	(919) 733 2801
			()
			()
			()

13 SITE REPRESENTATIVES INTERVIEWED Bill Mincey	14 TITLE Plant Engineer	15 ADDRESS 95 Glen Bridge Road	16 TELEPHONE NO. (704) 687-4329
Rudolph Gabel	Engineer	Rochester, NY	(716) 288-7440
Walt Probst	Retired	-----	()
			()
			()
			()

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 1000	19 WEATHER CONDITIONS Cool & Sunny
--	-------------------------------	---------------------------------------

IV. INFORMATION AVAILABLE FROM

01 CONTACT Bill Mincey	02 OF (Agency/Organization) Day International		03 TELEPHONE NO. 704 687-4329
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Christopher Huff	05 AGENCY -----	06 ORGANIZATION Greenhorne & O'Mara, Inc.	07 TELEPHONE NO. 919-782-9088
		08 DATE 1, 16, 92 MONTH DAY YEAR	



- I HIGHLY VOLATILE
- J EXPLOSIVE
- K REACTIVE
- L INCOMPATIBLE
- M NOT APPLICABLE

~~Approx. 14 drums of crushed thermometers~~
~~containing Mercury was disposed on site~~

PA FORM 2070-13(7-61)

What about the spill? Should they also be listed here?



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 2,392 04 NARRATIVE DESCRIPTION
It is not known whether ground water was contaminated as a result of the burial of Mercury - containing thermometers or of the spill noticed during a RCRA inspection. However, both the thermometers and the spill were cleaned up under the supervision of the North Carolina Solid and Hazardous Waste Management Branch.

01 ☐ B SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

There are no surface water intakes along the 15-mile surface water path.

01 ☐ C CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ D FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

None

01 ☒ E DIRECT CONTACT 02 ☐ OBSERVED (DATE 1971 & 1983) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 1,699 04 NARRATIVE DESCRIPTION

See ground water contamination section above.

01 ☒ F CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE 1971 & 1983) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED across 04 NARRATIVE DESCRIPTION

See above.

01 ☐ G DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ H WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

None

01 ☐ I POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

None



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NC 000222173

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

NONE

01 ☐ K DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include number of species)

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

NONE

01 ☐ L CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

NONE

01 ☒ M UNSTABLE CONTAINMENT OF WASTES
(Leaking drums, standing liquids, leaking drums)

02 ☒ OBSERVED (DATE 1983)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

Spill was noticed during a RCRA inspection on July 28, 1983. The spill was discovered on the ground near the hazardous waste storage area. Laboratory analysis of samples collected revealed the presence of Chromium and Lead.

01 ☐ N DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

NONE

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

NONE

01 ☒ P ILLEGAL/UNAUTHORIZED DUMPING

02 ☒ OBSERVED (DATE 1971)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

In June 1971, Taylor Instruments disposed of approximately 14 drums of crushed thermometers containing Mercury on site. The contents of the drums were emptied into a pit with the dimen. 6'x 6'x 3.5'. The pit was located under a concrete sidewalk leading to the visitors entrance to the facility.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 9,378

V. COMMENTS

V. SOURCES OF INFORMATION (Can specify references to site map, sample analysis reports)

STATE FILES, SITE INSPECTION.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A NPOES	-----			Pending
<input type="checkbox"/> B UIC				
<input type="checkbox"/> C AIR				Site has 16 Air Permits
<input type="checkbox"/> D RCRA				
<input type="checkbox"/> E RCRA INTERIM STATUS				
<input type="checkbox"/> F SPCC PLAN				
<input type="checkbox"/> G STATE (Specify)				
<input type="checkbox"/> H LOCAL (Specify)				
<input type="checkbox"/> I OTHER (Specify) Sewer	S-057-91	1-30-91	2-28-94	Sewer Discharge Permit
<input type="checkbox"/> J NONE				

III. SITE DESCRIPTION

01 STORAGE/ DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A SURFACE IMPOUNDMENT	_____	_____	<input type="checkbox"/> A INCINERATION	<input type="checkbox"/> A BUILDINGS ON SITE
<input type="checkbox"/> B PILES	_____	_____	<input type="checkbox"/> B UNDERGROUND INJECTION	
<input type="checkbox"/> C DRUMS, ABOVE GROUND	_____	_____	<input type="checkbox"/> C CHEMICAL/PHYSICAL	
<input checked="" type="checkbox"/> D TANK, ABOVE GROUND	See Comments	_____	<input type="checkbox"/> D BIOLOGICAL	
<input type="checkbox"/> E TANK, BELOW GROUND	_____	_____	<input type="checkbox"/> E WASTE OIL PROCESSING	
<input type="checkbox"/> F LANDFILL	_____	_____	<input checked="" type="checkbox"/> F SOLVENT RECOVERY	06 AREA OF SITE
<input type="checkbox"/> G LANDFARM	_____	_____	<input type="checkbox"/> G OTHER RECYCLING/RECOVERY	30 (Acres)
<input type="checkbox"/> H OPEN DUMP	_____	_____	<input checked="" type="checkbox"/> H OTHER Air Cleaners (Specify)	
<input type="checkbox"/> I OTHER (Specify)	_____	_____		

07 COMMENTS

Tolvene - 20,000 gals.
Recovered Tolvene - 4,000 gals.
Heptane - 4,000 gals.
Methyl Ethyl Ketone - 4,000 gals.
#2 Fuel Oil - 20,000 gals.

Not clear. Are these
feedsticks or waste?

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A ADEQUATE, SECURE ☒ B MODERATE ☐ C INADEQUATE, POOR ☐ D INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC The hazardous waste storage area contained approximately _____ drums and _____ containers. The drums and containers were sealed and intact. There was no evidence of leakage. The hazardous waste storage area has a cement pad and is surrounded by diking and fencing. The hazardous waste storage area is not covered. The above-ground storage tanks are in excellent condition. The tanks rest on a cement pad

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☐ NO
02 COMMENTS

cont.. and are surrounded by diking. The tanks are not protected by any covering.
The site is completely surrounded by a fence.

VI. SOURCES OF INFORMATION (Check specific references e.g. State files, sample analysis reports)

State Files, Site Inspection



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)	02 STATUS	03 DISTANCE TO SITE																					
<table><tr><td>SURFACE</td><td>WELL</td></tr><tr><td>A <input checked="" type="checkbox"/></td><td>B <input type="checkbox"/></td></tr><tr><td>C <input type="checkbox"/></td><td>D <input checked="" type="checkbox"/></td></tr></table>	SURFACE	WELL	A <input checked="" type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input checked="" type="checkbox"/>	<table><tr><td>ENDANGERED</td><td>AFFECTED</td><td>MONITORED</td></tr><tr><td>A <input type="checkbox"/></td><td>B <input type="checkbox"/></td><td>C <input type="checkbox"/></td></tr><tr><td>D <input type="checkbox"/></td><td>E <input type="checkbox"/></td><td>F <input type="checkbox"/></td></tr></table>	ENDANGERED	AFFECTED	MONITORED	A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	<table><tr><td>A</td><td>4</td><td>(mi)</td></tr><tr><td>B</td><td>400 ft.</td><td>XX</td></tr></table>	A	4	(mi)	B	400 ft.	XX
SURFACE	WELL																						
A <input checked="" type="checkbox"/>	B <input type="checkbox"/>																						
C <input type="checkbox"/>	D <input checked="" type="checkbox"/>																						
ENDANGERED	AFFECTED	MONITORED																					
A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>																					
D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>																					
A	4	(mi)																					
B	400 ft.	XX																					

III. GROUNDWATER

04 GROUNDWATER USE IN VICINITY (Check one)

☐ A ONLY SOURCE FOR DRINKING ☒ B DRINKING
(Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION
(No other water sources available)

☐ C COMMERCIAL, INDUSTRIAL, IRRIGATION
(Other sources available)
☐ D NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	2392	03 DISTANCE TO NEAREST DRINKING WATER WELL	400 ft.	XX					
04 DEPTH TO GROUNDWATER	10 +/- (ft)	05 DIRECTION OF GROUNDWATER FLOW	West	06 DEPTH TO AQUIFER OF CONCERN	(ft)	07 POTENTIAL YIELD OF AQUIFER	(gpd)	08 SOLE SOURCE AQUIFER	<input type="checkbox"/> YES <input type="checkbox"/> NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

Most of the wells in Buncombe County are drilled into unweathered bedrock. The average depth of wells in the area is 147 feet and an average yield of 10.3 gallons per minute.

10 RECHARGE AREA	11 DISCHARGE AREA
<input type="checkbox"/> YES COMMENTS UNKNOWN	<input type="checkbox"/> YES COMMENTS UNKNOWN
<input type="checkbox"/> NO	<input type="checkbox"/> NO

12 SURFACE WATER

13 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

14 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Unnamed Stream	<input type="checkbox"/>	250 feet
Lake Jullian	<input type="checkbox"/>	1.0 (mi)
French Broad River	<input type="checkbox"/>	1.5 (mi)
	<input type="checkbox"/>	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN 4 miles = 2,356 Total pop. = 9,378	02 DISTANCE TO NEAREST POPULATION									
<table><tr><td>ONE (1) MILE OF SITE</td><td>TWO (2) MILES OF SITE</td><td>THREE (3) MILES OF SITE</td></tr><tr><td>A 1699</td><td>B 2687</td><td>C 2636</td></tr><tr><td>NO OF PERSONS</td><td>NO OF PERSONS</td><td>NO OF PERSONS</td></tr></table>	ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	A 1699	B 2687	C 2636	NO OF PERSONS	NO OF PERSONS	NO OF PERSONS	400 ft. XX
ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE								
A 1699	B 2687	C 2636								
NO OF PERSONS	NO OF PERSONS	NO OF PERSONS								
03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING									
1123	400 ft. XX									

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site e.g. "100 people, mostly population within area")



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D002221703

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A $10^{-8} - 10^{-6}$ cm/sec ☐ B $10^{-6} - 10^{-4}$ cm/sec ☐ C $10^{-4} - 10^{-2}$ cm/sec ☐ D GREATER THAN 10^{-2} cm/sec

Use soil survey

02 PERMEABILITY OF BEDROCK (Check one)

☐ A IMPERMEABLE ☐ B RELATIVELY IMPERMEABLE ☐ C RELATIVELY PERMEABLE ☐ D VERY PERMEABLE
Less than 10^{-7} cm/sec $10^{-7} - 10^{-5}$ cm/sec $10^{-5} - 10^{-3}$ cm/sec Greater than 10^{-3} cm/sec

03 DEPTH TO BEDROCK

04 DEPTH OF CONTAMINATED SOIL ZONE

05 SOIL pH

06 NET PRECIPITATION

07 ONE YEAR 24 HOUR RAINFALL

08 SLOPE

SITE SLOPE

DIRECTION OF SITE SLOPE

TERRAIN AVERAGE SLOPE

09 FLOOD POTENTIAL

10

SITE IS IN _____ YEAR FLOODPLAIN

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (in miles)

ESTUARINE

OTHER

A _____ (mi)

B _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (for endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

A 500 ft. ~~XX~~

B 400 ft. ~~XX~~

C <1.0 (mi) D <1.0 (mi)

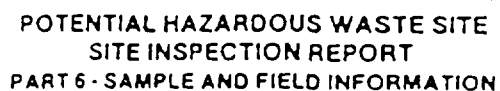
14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

ADD-

VII. SOURCES OF INFORMATION (Cite specific references e.g. State files, sample analysis, reports)

State Files, Site Inspection

-ADD



01 STATE	02 SITE NUMBER
NC	D002221703

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	C2 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNOWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL		State laboratory of Public Health	
VEGETATION			
OTHER			

01 TYPE	02 COMMENTS

C1 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL		C2 IN CUSTODY OF <u>Greenhorne & O'Mara</u> <small>(Name of Commission or individual)</small>
C3 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	C4 LOCATION OF MAPS <u>NCDEHNR and Greenhorne & O'Mara</u>	



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. CURRENT OWNER(S)

PARENT COMPANY (If applicable)

01 NAME Day International			02 D+B NUMBER			08 NAME Day International			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.) 95 Glen Bridge Road			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD, etc.) P.O. Box 360			11 SIC CODE								
05 CITY Arden			06 STATE NC			07 ZIP CODE 29704			12 CITY Waynesville			13 STATE NC			14 ZIP CODE 28786		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		

III. PREVIOUS OWNER(S) (List most recent first)

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME Sybron Corporation			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.) 95 Glen Bridge Road			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE								
05 CITY Arden			06 STATE NC			07 ZIP CODE 28704			05 CITY			06 STATE			07 ZIP CODE		
01 NAME Taylor Instruments			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.) 95 Glen Bridge Road			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE								
05 CITY Arden			06 STATE NC			07 ZIP CODE 28704			05 CITY			06 STATE			07 ZIP CODE		
01 NAME			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD, etc.)			04 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			05 CITY			06 STATE			07 ZIP CODE		

V. SOURCES OF INFORMATION (Cite applicable references, e.g., state files, sampling analysis, reports)

State Files, Site Inspection



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D002221703

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (If applicable)

01 NAME Day International	02 D+B NUMBER	03 NAME Day International	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.) 95 Glen Bridge Road	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.) P.O. Box 360	08 SIC CODE		
09 CITY Arden	10 STATE NC	11 ZIP CODE 29704	12 CITY Waynesville	13 STATE NC	14 ZIP CODE 28786
15 YEARS OF OPERATION	16 NAME OF OWNER				

III. PREVIOUS OPERATOR(S) (List most recent last; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME Sybron Corp.	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.) 95 Glen Bridge Road	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY Arden	10 STATE NC	11 ZIP CODE 29704	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION 4	16 NAME OF OWNER DURING THIS PERIOD Unknown				

01 NAME Taylor Instruments	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.) 5 Glen Bridge Road	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY Arden	10 STATE NC	11 ZIP CODE 29704	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION 10	16 NAME OF OWNER DURING THIS PERIOD Unknown				

01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.)	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY	10 STATE	11 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION	16 NAME OF OWNER DURING THIS PERIOD				

IV. SOURCES OF INFORMATION (List specific references, e.g., State files, sample analysis reports)

State Files, Site Inspection



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. ON-SITE GENERATOR

01 NAME Day International	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, AFD, etc.) 95 Glen Bridge Road	04 SIC CODE		
05 CITY Arden	06 STATE NC	07 ZIP CODE 29704	

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME Ecoflow	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, AFD, etc.) P.O. Box 10383	04 SIC CODE	03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE		
05 CITY Greensboro	06 STATE NC	07 ZIP CODE 27404	05 CITY	06 STATE	07 ZIP CODE
01 NAME Groce Laboratories	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, AFD, etc.) P.O. Box 816	04 SIC CODE	03 STREET ADDRESS (P.O. Box, AFD, etc.)	04 SIC CODE		
05 CITY Greer	06 STATE SC	07 ZIP CODE 29651	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

State Files, Site Inspection



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D002221703

1. PAST RESPONSE ACTIVITIES

01 ☐ A WATER SUPPLY CLOSED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ B TEMPORARY WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ C PERMANENT WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☒ D SPILLED MATERIAL REMOVED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

Mercury found in walls in old mercury fill room during remodeling

01 ☒ E CONTAMINATED SOIL REMOVED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

Pit filled with 14 drums of bad thermometers containing mercury

01 ☐ F WASTE REPACKAGED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

01 ☐ G WASTE DISPOSED ELSEWHERE
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

No

01 ☒ H ON SITE BURIAL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

oil from mercury dump site removed when on site disposal was cleaned up.

01 ☐ I IN SITU CHEMICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ J IN SITU BIOLOGICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ K IN SITU PHYSICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ L ENCAPSULATION
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ M EMERGENCY WASTE TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ N CUTOFF WALLS
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ O EMERGENCY DIKING/SURFACE WATER DIVERSION
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ P CUTOFF TRENCHES/SUMP
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ Q SUBSURFACE CUTOFF WALL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ S CAPPING/COVERING
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ T BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ U GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ V BOTTOM SEALED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ W GAS CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ X FIRE CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ Y LEACHATE TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

/A

01 ☒ Z AREA EVACUATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

01 ☒ 1 ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

Site is fenced

01 ☐ 2 POPULATION RELOCATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ 3 OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

III. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis reports)

State Files, Site Inspection



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D002221703

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION YES ☒ NO ☐ ?

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state laws, sampling analysis reports)



DATE REPORT ACCEPTED Jan. 11, 1993
DISPOSITION SEA (No Further Action)
SAM SIGNATURE Craig A. Benedikt

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

November 18, 1992

Mr. Craig Benedikt
NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta, Georgia 30365

REC'D.

NOV 23 1992

WPD-000


RE: Site Inspection, PRESCORE
Sybron Arden NCD 002 221 703
Arden, Buncombe County, North Carolina

Dear Mr. Benedikt:

Enclosed herewith is the Site Inspection (SI) PRESCORE by the North Carolina Superfund Section for Sybron Arden, (NCD 002 221 703).

The PRESCORE enclosed was calculated using the area of soil contaminated by the burial of the drums of broken thermometers as the source. Based on this scenario the site would be recommended for a Site Evaluation Accomplished (SEA), however, since this soil, and two other areas of contamination were removed or cleaned up prior to the initiation of any site inspections, these areas of contamination should not be considered as sources. The North Carolina Superfund Section gives a SEA recommendation for this site.

If you have any questions, please contact me at (919) 733-2801.

Sincerely,

Harry Zinn
Environmental Engineer
Contracts Management Branch
NC Superfund Section

HZ\gj

Enclosure

Record Information

1. Site Name: Sybron Arden
(as entered in CERCLIS)
2. Site CERCLIS Number: NCD002221703
3. Site Reviewer: H. Zinn
4. Date: 11/6/92
5. Site Location: Arden/Buncombe, North Carolina
(City/County, State)
6. Congressional District: 11
7. Site Coordinates: Single
Latitude: 35°27'45.0" Longitude: 082°31'16.0"

Site Description

1. Setting: Rural
2. Current Owner: Private - Industrial
3. Current Site Status: Active
4. Years of Operation: Active Site , from and to dates: 1964 to Present
5. How Initially Identified: Unknown Owner notified State
6. Entity Responsible for Waste Generation:
 - Manufacturing
 - Other Manufacturing
7. Site Activities/Waste Deposition:
 - Drum/Container Storage

Waste Description

8. Wastes Deposited or Detected Onsite:

- Organic Chemicals
- Solvents
- Metals

Response Actions

9. Response/Removal Actions:

- Other Removal Action Has Occurred

RCRA Information

10. For All Active Facilities, RCRA Site Status:

- Other - Large Quantity Generator

Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 1325.0

14. Residential Population Within 4 Miles: 9022.0

Water Use Information

15. Local Drinking Water Supply Source:

- Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 2399.0

17. Drinking Water Supply System Type for Local Drinking
Water Supply Sources:

- Municipal (Services over 25 People)
- Private

18. Surface Water Adjacent to/Draining Site:

- Stream

PREscore 1.0 - PRESCORE.TCL File 12/23/91
HRS DOCUMENTATION RECORD
Sybron Arden - 11/13/92

PAGE: 1

1. Site Name: Sybron Arden
(as entered in CERCLIS)
2. Site CERCLIS Number: NCD002221703
3. Site Reviewer: H. Zinn
4. Date: 11/6/92
5. Site Location: Arden/Buncombe, North Carolina
(City/County,State)
6. Congressional District: 11
7. Site Coordinates: Single

Latitude: 35°27'45.0"

Longitude: 082°31'16.0"

	Score
Ground Water Migration Pathway Score (Sgw)	2.41
Surface Water Migration Pathway Score (Ssw)	1.15
Soil Exposure Pathway Score (Ss)	1.20
Air Migration Pathway Score (Sa)	0.95

Site Score	1.54
------------	------

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

PREscore 1.0 - PRESCORE.TCL File 12/23/91
GROUND WATER MIGRATION PATHWAY SCORESHEET
Sybron Arden - 11/13/92

PAGE: 2

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Bedrock Aquifer		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	15
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	230
3. Likelihood of Release	550	230
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	18
Targets		
7. Nearest Well	50	1.80E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	2.50E+01
8d. Population (lines 8a+8b+8c)	**	2.50E+01
9. Resources	5	5.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	4.80E+01
12. Targets (including overlaying aquifers)	**	4.80E+01
13. Aquifer Score	100	2.41
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	2.41

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

PREscore 1.0 - PRESCORE.TCL File 12/23/91 PAGE: 3
 SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
 Sybron Arden - 11/13/92

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	1
2c. Distance to Surface Water	25	20
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	210
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	210
5. Likelihood of Release	550	210
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	10
8. Waste Characteristics	100	18
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.23

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	210
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+08
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	1000	180
Targets		
18. Food Chain Individual	50	2.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.03E-03
19d. Population (lines 19a+19b+19c)	**	3.03E-03
20. Targets (lines 18+19d)	**	2.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.92

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	210
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+08
24. Hazardous Waste Quantity	*	10
25. Waste Characteristics	1000	180
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	0.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	0.00E+00
27. Targets (line 26d)	**	0.00E+00
28. ENVIRONMENTAL THREAT SCORE	60	0.00
29. WATERSHED SCORE	100	1.15
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	1.15

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer Aquifer: Bedrock Aquifer		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	15
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	230
3. Likelihood of Release	550	230
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	1.00E+04
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	18
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	5.00E+00
10. Targets (lines 7+8d+9)	**	5.00E+00
11. DRINKING WATER THREAT SCORE	100	0.25

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	230
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	5.00E+08
14. Hazardous Waste Quantity	*	10
15. Waste Characteristics	1000	180
Targets		
16. Food Chain Individual	50	1.00E+00
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	0.00E+00
17c. Pot. Human Food Chain Contamination	**	1.21E-03
17d. Population (lines 17a+17b+17c)	**	1.21E-03
18. Targets (lines 16+17d)	**	1.00E+00
19. HUMAN FOOD CHAIN THREAT SCORE	100	0.50

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	230
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc.	*	5.00E+08
22. Hazardous Waste Quantity	*	10
23. Waste Characteristics	1000	180
Targets		
24. Sensitive Environments		
24a. Level I Concentrations	**	0.00E+00
24b. Level II Concentrations	**	0.00E+00
24c. Potential Contamination	**	0.00E+00
24d. Sensitive Environments (lines 24a+24b+24c)	**	0.00E+00
25. Targets (line 24d)	**	0.00E+00
26. ENVIRONMENTAL THREAT SCORE	60	0.00
27. WATERSHED SCORE	100	0.75
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	0.75

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREscore 1.0 - PRESCORE.TCL File 12/23/91
 SOIL EXPOSURE PATHWAY SCORESHEET
 Sybron Arden - 11/13/92

PAGE: 9

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	1.00E+01
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	1.00E+01
11. RESIDENT POPULATION THREAT SCORE	**	9.90E+04

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

PREscore 1.0 - PRESCORE.TCL File 12/23/91
 SOIL EXPOSURE PATHWAY SCORESHEET
 Sybron Arden - 11/13/92

PAGE: 10

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	5.00E+00
13. Area of Contamination	100	5.00E+00
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	1.00E+00
20. Targets (lines 18+19)	**	2.00E+00
21. NEARBY POPULATION THREAT SCORE	**	1.80E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	1.20

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	300
2b. Particulate Potential to Release	500	220
2c. Potential to Release	500	300
3. Likelihood of Release	550	300
Waste Characteristics		
4. Toxicity/Mobility	*	2.00E+03
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	10
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	6.00E+00
8d. Population (lines 8a+8b+8c)	**	6.00E+00
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	0.00E+00
10c. Sens. Environments(lines 10a+10b)	***	0.00E+00
11. Targets (lines 7+8d+9+10c)	**	2.60E+01
AIR MIGRATION PATHWAY SCORE (Sa)	100	9.45E-01

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: hypothetical

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

WASTE QUANTITY
Sybron Arden - 11/13/92

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		hypothetical	
b. Source Type		Contaminated Soil	
c. Secondary Source Type		N.A.	
d. Source Volume (yd3)	Source Area (ft2)	0.00	96.00
e. Source Volume/Area Value		2.82E-03	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		2.82E-03	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Mercury	< 2	YES	8.6E+04	ppm

Documentation for Source Area:

The area of the originally contaminated site, at the maximum level of mercury contamination found in the soil samples, is used as a hypothetical source for this site scoring, even though removal took place before a site inspection was initiated.

Reference:

WASTE QUANTITY
Sybron Arden - 11/13/92

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No. Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1 hypothetical	GW-SW-SE-A	2.82E-03	0.00E+00	2.82E-03

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values	HWQVs*	WCVs**
Ground Water	Toxicity/Mobility 1.00E+04	10	18
SW: Overland Flow, DW	Tox./Persistence 1.00E+04	10	18
SW: Overland Flow, HFC	Tox./Persis./Bioacc. 5.00E+08	10	180
SW: Overland Flow, Env	Etox./Persis./Bioacc. 5.00E+08	10	180
SW: GW to SW, DW	Tox./Persistence 1.00E+04	10	18
SW: GW to SW, HFC	Tox./Persis./Bioacc. 5.00E+08	10	180
SW: GW to SW, Env	Etox./Persis./Bioacc. 5.00E+08	10	180
Soil Exposure:Resident	Toxicity 1.00E+04	10	18
Soil Exposure: Nearby	Toxicity 1.00E+04	10	18
Air	Toxicity/Mobility 2.00E+03	10	10

* Hazardous Waste Quantity Factor Values

** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

PREscore 1.0 - PRESCORE.TCL File 12/23/91
GROUND WATER PATHWAY AQUIFER SUMMARY
Sybron Arden - 11/13/92

PAGE: 16

No. Aquifer ID	Type	Overlaying No.	Inter- Connected with	Likelihood of Release	Targets
1 Bedrock Aquifer	Non K	0	0	230	4.80E+01

Containment

No.	Source ID	HWQ Value	Containment Value
1	hypothetical	2.82E-03	10
=====			
	Containment Factor	10	

Net Precipitation

Net Precipitation (inches)	8.00
----------------------------	------

Documentation for Net Precipitation:

Reference: 7

Aquifer: Bedrock Aquifer
Type of Aquifer: Non Karst
Overlaying Aquifer: 0
Interconnected with: 0

Documentation for Bedrock Aquifer Aquifer:

Reference: 15

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
-----	---------	-----------	---------------------	------------------------

- N/A and/or data not specified

=====

Observed Release Factor	0
-------------------------	---

=====

POTENTIAL TO RELEASE

Containment

Containment Factor 10

Net Precipitation

Net Precipitation Factor 3

Depth to Aquifer

A. Depth of Hazardous Substances 6.00 feet

B. Depth to Aquifer from Surface 20.00 feet

C. Depth to Aquifer (B - A) 14.00 feet

Depth to Aquifer Factor 5

Travel Time

Are All Layers Karst? NO

Thickness of Layer(s) with Lowest Conductivity 14.00 feet

Hydraulic Conductivity (cm/sec) 1.0E-06

Travel Time Factor 15

=====
Potential to Release Factor 230

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Mercury	10000	1.00E+00	1.00E+04

PREscore 1.0 - PRESCORE.TCL File 12/23/91
GROUND WATER PATHWAY WASTE CHARACTERISTICS
Sybron Arden - 11/13/92

PAGE: 20

Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
-------------	---	-------------------	-------------------	--------------------------------

- N/A and/or data not specified

PREscore 1.0 - PRESCORE.TCL File 12/23/91
GROUND WATER PATHWAY WASTE CHARACTERISTICS
Sybron Arden - 11/13/92

PAGE: 21

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+04
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination Population
-----	---------	-------------	---------------------	--------------------------------------

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	5.0	4.00E-01
> 1/4 to 1/2	12.0	1.10E+00
> 1/2 to 1	14.0	5.00E-01
> 1 to 2	163.0	3.00E+00
> 2 to 3	931.0	6.80E+00
> 3 to 4	1275.0	1.31E+01

Potential Contamination Factor: 25.000

Documentation for Target Population > 0 to 1/4 mile Distance Category:

Reference: 13,17

Nearest Well

Level of Contamination: Potential
Distance in miles: 0.30

Nearest Well Factor: 1.80E+01

Resources

Resource Use: YES

Resource Factor: 5.00E+00

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

Documentation for Wellhead Protection Area:

Reference: 25

PREscore 1.0 - PRESCORE.TCL File 12/23/91
SURFACE WATER PATHWAY SEGMENT SUMMARY
Sybron Arden - 11/13/92

PAGE: 25

No. Segment ID	Segment Type	Water Type	Start Point (mi)	End Point (mi)	Average Flow (cfs)
1 Unnamed Tributary	River	Fresh	0.00	1.00	5
2 Lake Julian	Lake	Fresh	1.00	2.00	10
3 Unnamed Tributary	River	Fresh	2.00	2.50	10
4 French Broad R.	River	Fresh	2.50	15.00	2065

Documentation for segment: French Broad R.:

Reference: 27

OBSERVED RELEASE

No. Sample ID	Sample Type	Distance (miles)	Level of Contamination		
			DW	HFC	Env

- N/A and/or data not specified

=====

Observed Release Factor	0
-------------------------	---

POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

No.	Source ID	HWQ Value	Containment Value
1	hypothetical	2.82E-03	10

=====

Containment Factor: 10

Distance to Surface Water

Distance to Surface Water: 250.0 feet
Distance to Surface Water Factor: 20

Runoff

A. Drainage Area: 20.0 acres
B. 2-year, 24-hour Rainfall: 3.2 inches

Documentation for Rainfall:

Reference: 8

C. Soil Group: B
Medium-textured soils with moderate infiltration rates

Runoff Factor: 1

=====
Potential to Release by Overland Flow Factor: 210

Potential to Release by Flood

No. Source ID	HWQ Value	Flood Containment Value	Flood Frequency Value	Potential to Release by Flood
- N/A and/or data not specified				

=====

Potential to Release by Flood Factor: 0

Documentation for Flood Frequency, Source hypothetical:

Reference: 26

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Mercury	10000	1.00E+00	1.00E+04

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
------------	---	-------------------	----------------------	-----------------------------------

- N/A and/or data not specified

Toxicity/Persistence Value from Source Hazardous Substances:	1.00E+04
Toxicity/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
--------	--	------------

- N/A and/or data not specified

=====

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
--------	--	------------

- N/A and/or data not specified

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
- N/A and/or data not specified		

Type of Surface Water Body	Total Population	Dilution-Weighted Population
- N/A and/or data not specified		

=====

Dilution-Weighted Population Served
 by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persistence Value	Bio- accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Mercury	10000	1.00E+00	5.00E+04	5.00E+08

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Bio- accum. Value	Toxicity/ Persistence/ Bioaccum. Value
------------	---	-------------------	----------------------	-------------------------	---

- N/A and/or data not specified

Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+08
Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence/Bioaccumulation Factor:	5.00E+08
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	180

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
---------	-------------------------------	--------------------------------------

- N/A and/or data not specified

=====

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
---------	-------------------------------	--------------------------------------

- N/A and/or data not specified

=====

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Fishery	Annual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di
2 Lake Julian	100.0	Lake	10	0.3	1.00E-01	3.00E-02
4 French Broad R.	100.0	River	2065	0.3	1.00E-03	3.00E-04

Sum of (Pi*Di): 3.03E-02

Potential Human Food Chain Contamination Factor: 3.03E-03

Documentation for Unnamed Tributary Fishery:

From the site it is approximately 250 feet to a small unnamed stream. This stream flows north approximately 1 mile to Lake Julian, a small manmade lake used by CP&L for cooling water at it's Asheville steam plant. After flowing 1 mile through the lake, the surface water continues 1/2 mile as an unnamed stream until it enters the French Broad River. The surface water continues on as the French Broad River for the remainder of the 15 mile surface water segment.

Reference: 11,19,20,28

Documentation for Lake Julian Fishery:

Reference: 19,20,28

Documentation for French Broad R. Fishery:

Reference: 19,20,28

Food Chain Individual

Location of Nearest Fishery: Lake Julian
Distance from the Probable Point of Entry: 1.00 miles
Type of Surface Water Body: Lake
Dilution Weight: 0.1000000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Eco- toxicity Value	Persistence Value	Bio- accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Mercury	10000	1.00E+00	5.00E+04	5.00E+08

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Eco- toxicity Value	Persistence Value	Bio- accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
---------------	---	---------------------------	----------------------	-------------------------	--

- N/A and/or data not specified

Ecotoxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+08
Ecotoxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Ecotoxicity/Persistence/Bioaccumulation Factor:	5.00E+08
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	180

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

=====

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
-----------------------	---	-----------------------------------

- N/A and/or data not specified

Sum of Sensitive Environments Values:	0
---------------------------------------	---

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
---------	--	------------------------------

- N/A and/or data not specified

Total Wetlands Frontage:	0.00 Miles	Total Wetlands Value:	0
--------------------------	------------	-----------------------	---

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Sensitive Environments

Type of Surface		Sensitive Environment
Water Body	Sensitive Environment	Value

Wetlands

Type of Surface		Wetlands	Wetlands
Water Body	Sensitive Environment	Frontage	Value

- N/A and/or data not specified

Type of Surface	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Water Body				

- N/A and/or data not specified

Sum of Dj(Wj+Sj):	0.00E+00
Sum of Dj(Wj+Sj)/10:	0.00E+00

=====

Potential Contamination Sensitive Environment Factor: 0.00E+00

Containment

No.	Source ID	HWQ Value	Containment Value
1	hypothetical	2.82E-03	10
=====			
Containment Factor			10

Net Precipitation

Net Precipitation (inches)	8.00
----------------------------	------

Documentation for Net Precipitation:

Reference: 7

Aquifer: Bedrock Aquifer
Type of Aquifer: Non Karst
Overlaying Aquifer: 0
Interconnected with: 0

Documentation for Bedrock Aquifer Aquifer:

Reference: 15

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
- N/A and/or data not specified				

=====

Observed Release Factor	0
-------------------------	---

POTENTIAL TO RELEASE

Ground Water to Surface Water Angle

Probable Point of Entry	0.05	miles
Angle Theta	150	

Containment

Containment Factor	10	
--------------------	----	--

Net Precipitation

Net Precipitation Factor	3	
--------------------------	---	--

Depth to Aquifer

A. Depth of Hazardous Substances	6.00	feet
B. Depth to Aquifer from Surface	20.00	feet
C. Depth to Aquifer (B - A)	14.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO	
Thickness of Layer(s) with Lowest Conductivity	14.00	feet
Hydraulic Conductivity (cm/sec)	1.0E-06	
Travel Time Factor	15	

=====

Potential to Release Factor	230
-----------------------------	-----

=====

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Factor Value	Persist. Value	Mobility Value	Toxicity/ Mobility/ Persistence
Mercury	10000	1.00E+00	1.00E+00	1.00E+04

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Toxicity Factor Value	Persist. Value	Toxicity/ Persistence
--	-----------------------------	-------------------	--------------------------

- N/A and/or data not specified

Toxicity/Mobility/Persistence Value from Source Hazardous Substances:	1.00E+04
Toxicity/Mobility/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility/Persistence Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
--------	--	------------

- N/A and/or data not specified

=====
Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population
--------	--	------------

- N/A and/or data not specified

=====
Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
-----------	------------------------------	----------------------

- N/A and/or data not specified

Type of Surface Water Body	Total Population	Dilution-Weighted Population
-------------------------------	---------------------	---------------------------------

- N/A and/or data not specified

=====

Dilution-Weighted Population Served by Potentially Contaminated Intakes:	0.0
---	-----

Potential Contamination Factor:	0.0
---------------------------------	-----

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Persist. Value	Mobility Value	Bio- accum. Value	Tox./Mobil./ Persistence/ Bioaccum. Value
Mercury	10000	1.00E+00	1.00E+00	5.00E+04	5.00E+08

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Toxicity Value	Persist. Value	Bio- accum. Value	Toxicity/ Persistence Bioaccum. Value
--	-------------------	-------------------	-------------------------	--

- N/A and/or data not specified

Toxicity/Mobility/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+08
Toxicity/Mobility/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility/Persistence/Bioaccumulation Factor:	5.00E+08
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	180

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
---------	-------------------------------	--------------------------------------

- N/A and/or data not specified

=====

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
---------	-------------------------------	--------------------------------------

- N/A and/or data not specified

=====

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Fishery	Annual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di
2 Lake Julian	100.0	Lake	10	0.3	4.00E-02	1.20E-02
4 French Broad R.	100.0	River	2065	0.3	4.00E-04	1.20E-04

Sum of (Pi*Di): 1.21E-02

Potential Human Food Chain Contamination Factor: 1.21E-03

Documentation for Unnamed Tributary Fishery:

From the site it is approximately 250 feet to a small unnamed stream. This stream flows north approximately 1 mile to Lake Julian, a small manmade lake used by CP&L for cooling water at it's Asheville steam plant. After flowing 1 mile through the lake, the surface water continues 1/2 mile as an unnamed stream until it enters the French Broad River. The surface water continues on as the French Broad River for the remainder of the 15 mile surface water segment.

Reference: 11,19,20,28

Documentation for Lake Julian Fishery:

Reference: 19,20,28

Documentation for French Broad R. Fishery:

Reference: 19,20,28

Food Chain Individual

Location of Nearest Fishery: Lake Julian
Distance from the Probable Point of Entry: 1.00 miles
Type of Surface Water Body: Lake
Dilution Weight: 0.0400000
Level of Contamination: Potential

Food Chain Individual Factor: 2.00

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Eco- toxicity Value	Persist. Value	Mob. Value	Bio- accum. Value	Ecotoxicity/ Mobility/ Persistence/ Bioaccum. Value
Mercury	10000	1.00E+00	1.00E+00	5.00E+04	5.00E+08

Hazardous Substances Found in an Observed Release

Observed Release Hazardous Substance	Eco- toxicity Value	Persist. Value	Bio- accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
--	---------------------------	-------------------	-------------------------	--

- N/A and/or data not specified

Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Source Substances:	5.00E+08
Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Observed Hazardous Substances:	0.00E+00
Ecotoxicity/Mobility/Persistence/Bioaccummulation Factor:	5.00E+08
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	180

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

=====

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
-----------------------	---	-----------------------------------

- N/A and/or data not specified

Sum of Sensitive Environments Values:	0
---------------------------------------	---

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
---------	--	------------------------------

- N/A and/or data not specified

Total Wetlands Frontage:	0.00 Miles	Total Wetlands Value:	0
--------------------------	------------	-----------------------	---

=====

Sum of Sensitive Environments Value + Wetlands Value:	0.00E+00
---	----------

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value
-------------------------------	-----------------------	-----------------------------------

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value
-------------------------------	-----------------------	----------------------	-------------------

- N/A and/or data not specified

Type of Surface	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)
Water Body				

- N/A and/or data not specified

Sum of Dj(Wj+Sj): 0.00E+00
 Sum of Dj(Wj+Sj)/10: 0.00E+00

=====

Potential Contamination Sensitive Environment Factor: 0.00E+00

Likelihood of Exposure

No.	Source ID	Level of Contamination
-----	-----------	------------------------

1	hypothetical	Level I
---	--------------	---------

Likelihood of Exposure Factor: 550

Documentation for Area of Contamination, Source hypothetical:

Reference: 4

Source Hazardous Substance No.	Depth (ft.)	Concent.	Cancer	RFD	Units
1 Mercury	< 2	8.6E+04	0.0E+00	1.7E+02	ppm

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Mercury	10000

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Targets

Level I Population:	0.0	Value:	0.00
Level II Population:	0.0	Value:	0.00
Workers:	374.0	Value:	10.00

Documentation for Workers:

Reference: 13

Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Terrestrial Sensitive Environment	Value
-----------------------------------	-------

- N/A and/or data not specified

=====

Terrestrial Sensitive Environments Factor: 0.00

Likelihood of Exposure

No. Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
---------------	------------------------	-------------------------------	----------------------------

1 hypothetical	Level I	5	96
----------------	---------	---	----

Highest Attractiveness/Accessibility Value: 5

Sum of Eligible Areas Of Contamination (sq. feet): 96

Area of Contamination Value: 5

Likelihood of Exposure Factor Category: 5

Documentation for Attractiveness/Accessibility, Source hypothetical:

Reference: 13

Source Hazardous Substance No.	Depth (ft.)	Concent.	Cancer	RFD	Units
1 Mercury	< 2	8.6E+04	0.0E+00	1.7E+02	ppm

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value
Mercury	10000

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Nearby Individual

Population within 1/4 mile: 34.0

Nearby Individual Value: 1.0

Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	34.0	0.1
> 1/4 to 1/2 mile	185.0	0.2
> 1/2 to 1 mile	1106.0	1.0
Population Within 1 Mile Factor:		1.0

Documentation for Population > 0 to 1/4 mile Distance Category:

Reference: 14

PREscore 1.0 - PRESCORE.TCL File 12/23/91
AIR PATHWAY LIKELIHOOD OF RELEASE
Sybron Arden - 11/13/92

PAGE: 88

OBSERVED RELEASE

No. Sample ID	Distance (miles)	Level of Contamination
---------------	---------------------	------------------------

- N/A and/or data not specified

=====

Observed Release Factor: 0

Gas Migration Potential

GAS POTENTIAL TO RELEASE

Source ID	Source Type	Gas Contain. Value (A)	Gas Source Type Value (B)	Gas Migrtn. Potent. Value (C)	Sum (B+C)	Gas Potential to Rel. Value A(B+C)
hypothetical	Contaminated Soil	10	19	11	30	300

Gas Potential to Release Factor: 300

Source: hypothetical

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value
Mercury	11

Average of Gas Migration Potential Value for 3 Hazardous Substances: 11.000
=====

Gas Migration Potential Value From Table 6-7: 11

Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

Source ID	Source Type	Partic. Contain. Value (A)	Partic. Source Type Value (B)	Partic. Migrtn. Potent. Value (C)	Sum (B+C)	Partic. Potential to Rel. Value A(B+C)
hypothetical	Contaminated Soil	10	22	0	22	220

Particulate Potential to Release Factor: 220

Source: hypothetical

Particulate Hazardous Substance

Mercury

Source: 1 hypothetical

Source Hazardous Waste Quantity Value: 0.00

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Mercury	10000	2.00E-01	2.00E-05	2.00E+03

PREscore 1.0 - PRESCORE.TCL File 12/23/91
AIR PATHWAY WASTE CHARACTERISTICS
Sybron Arden - 11/13/92

PAGE: 94

Hazardous Substances Found in an Observed Release

Sample Observed Release ID Hazardous Substance	Particulate Toxicity/ Mobility Value	Gas Toxicity/ Mobility Value
---	--	------------------------------------

- N/A and/or data not specified

PREscore 1.0 - PRESCORE.TCL File 12/23/91
AIR PATHWAY WASTE CHARACTERISTICS
Sybron Arden - 11/13/92

PAGE: 95

Toxicity/Mobility Value from Source Hazardous Substances:	2.00E+03
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	2.00E+03
Sum of Source Hazardous Waste Quantity Values:	2.82E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	10

Actual Contamination

No. Sample ID	Distance (miles)	Level of Contamination
---------------	---------------------	------------------------

- N/A and/or data not specified

Potential Contamination

Distance Categories Subject
to Potential Contamination

	Population	Value
Onsite	0.0	0.0000
> 0 to 1/4 mile	34.0	1.3000
> 1/4 to 1/2 mile	185.0	0.9000
> 1/2 to 1 mile	1106.0	2.6000
> 1 to 2 miles	2691.0	0.8000
> 2 to 3 miles	2641.0	0.4000
> 3 to 4 miles	2365.0	0.2000

Potential Contaminantion Factor: 6.0000

Documentation for Population Onsite Distance Category:

Reference: 14

Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

Reference: 11

Resources

Resource Use: NO

Resource Value: 0

Actual Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Actual Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value
- N/A and/or data not specified		

=====

Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value	Distance Weight	Weighted Value/10
	0.000	0	1.0000	0.000

Potential Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value	Distance Weight	Weighted Value/10
- N/A and/or data not specified				

=====

Sensitive Environment Potential Contamination Factor: 0.000

REFERENCES FOR SYBRON ARDEN
NCD 002 221 703

1. Sybron Arden, Arden, North Carolina, NCD002221703, Memo to State files from Cheryl McMorris, North Carolina Solid and Hazardous Waste Management Branch, Raleigh, North Carolina.
2. Letter from Rudolph Gabel, Rudolph Gabel, Incorporated, former Director of Regulatory Compliance for Sybron Corporation to Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, regarding information concerning the onsite burial of mercury at the Sybron Arden facility, February 6, 1992.
3. Memo to Lee Crosby, Superfund/Inactive Branch, from Douglas Holyfield, North Carolina Hazardous Waste Branch, January 19, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
4. Preliminary Assessment: Sybron Arden, Arden, North Carolina, NCD002221703, December 9, 1987. Cheryl McMorris, NC Solid and Hazardous Waste Management Branch, Raleigh, NC.
5. Potential Hazardous Waste Site Preliminary Assessment Form, October 6, 1987.
6. Letter to Dan Bumcom, Occupational Health Branch, Epidemiology Section, Douglas Holyfield, North Carolina Hazardous Waste Branch, May 31, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
7. Climatic Atlas of the United States, US Department of Commerce, National Climatic Center, Asheville, NC, 1979.
8. Rainfall Frequency Atlas of the United States, Technical Paper No. 40, US Department of Commerce, U.S. Government Printing Office, Washington, DC, 1963.
9. Preliminary Explanatory Text for the 1985 Geologic Map of North Carolina, November 4, 1988.
10. 1990 United States Census, North Carolina Section.
11. U.S Geological Survey, 7.5 minute series Topographic Quadrangle Maps of North Carolina: Asheville 1961, Skyland 1978, Fruitland 1978, and Oteen 1990.
12. U.S. Fish and Wildlife Service, Endangered and Threatened Species of the Southeastern United States, (Atlanta, Georgia, 1988).
13. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Helene Kasser, Greenhorne & O'Mara, December 17, 1991.

14. Christopher Huff, Greenhorne & O'Mara, Population calculations, Re: Sybron Arden, March 10, 1992.
15. Trapp, Henry, Geologist, U.S. Geological Survey and Department of the Interior, Geology and Ground Water in the Asheville Area, North Carolina, Bulletin Number 16, April 1970.
16. General Soil Maps of the Buncombe County, North Carolina, U.S. Department of Agriculture, Soil Conservation Service, Asheville, North Carolina.
17. Christopher Huff, Greenhorne & O'Mara, Calculation of population on groundwater, Re: Sybron Arden site, March 10, 1992.
18. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, December 17, 1991.
19. Christopher Huff, Greenhorne & O'Mara, Telephone conversation with Nick Clemmons from the State of North Carolina Wildlife Management. Uses of the French Broad River in Buncombe County January 14, 1992.
20. Information package on the French Broad River by The North Carolina Wildlife Resources Commission, Raleigh, North Carolina.
21. Permits from Day International, air and storm water.
22. Project report from Envirochem Environmental Services Inc., on mercury fill room cleanup done in January 1989.
23. U.S. Environmental Protection Agency, 1990. Hazard Ranking System; Final Rule. 55 FR 51532, December 14, 1990.
24. U.S. Environmental Protection Agency, 1991. Superfund Chemical Data Matrix (SCDM). Office of Solid Waste and Emergency Response. Directive 9345.1-13. Revised semi-annually.
25. Memo to Superfund Section from Hal Bryson, August 17, 1992. Update on status of Well Head Protection Programs in North Carolina.
26. Federal Emergency Management Agency, Flood Insurance Rate Map Buncombe County, North Carolina, Community-Panel Number 370031 0230B, revised August 1, 1980.
27. US Geological Survey Water Data Report NC-88-1. Water Resources Data, North Carolina, Water Year 1988.
28. Memo to File from Harry Zinn on November 6, 1992. Fisheries in the vicinity of Sybron Arden.
29. Letter to Doug Holyfield, DEHNR, Solid Waste Management Division, from Romie Herring, Division of Health Services, Occupational Health Branch, Industrial Hygiene Consultant, August 16, 1989. Presence of mercury vapor in the former mercury fill room.

30. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Ed Dzierzynski, Day International, November 28, 1989. Results of testing for mercury vapor in former mercury fill room.
31. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Robert Young, Day International, January 29, 1990. Results of testing for mercury vapor in former mercury fill room and intent to discontinue testing.

REFERENCES FOR SYBRON ARDEN
NCD 002 221 703

1. Sybron Arden, Arden, North Carolina, NCD002221703, Memo to State files from Cheryl McMorris, North Carolina Solid and Hazardous Waste Management Branch, Raleigh, North Carolina.
2. Letter from Rudolph Gabel, Rudolph Gabel, Incorporated, former Director of Regulatory Compliance for Sybron Corporation to Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, regarding information concerning the onsite burial of mercury at the Sybron Arden facility, February 6, 1992.
3. Memo to Lee Crosby, Superfund/Inactive Branch, from Douglas Holyfield, North Carolina Hazardous Waste Branch, January 19, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
4. Preliminary Assessment: Sybron Arden, Arden, North Carolina, NCD002221703, December 9, 1987. Cheryl McMorris, NC Solid and Hazardous Waste Management Branch, Raleigh, NC.
5. Potential Hazardous Waste Site Preliminary Assessment Form, October 6, 1987.
6. Letter to Dan Bumcom, Occupational Health Branch, Epidemiology Section, Douglas Holyfield, North Carolina Hazardous Waste Branch, May 31, 1989. Notification that Day International found mercury in the walls of the old mercury fill room while remodeling the facility.
7. Climatic Atlas of the United States, US Department of Commerce, National Climatic Center, Asheville, NC, 1979.
8. Rainfall Frequency Atlas of the United States, Technical Paper No. 40, US Department of Commerce, U.S. Government Printing Office, Washington, DC, 1963.
9. Preliminary Explanatory Text for the 1985 Geologic Map of North Carolina, November 4, 1988.
10. 1990 United States Census, North Carolina Section.
11. U.S Geological Survey, 7.5 minute series Topographic Quadrangle Maps of North Carolina: Asheville 1961, Skyland 1978, Fruitland 1978, and Oteen 1990.
12. U.S. Fish and Wildlife Service, Endangered and Threatened Species of the Southeastern United States, (Atlanta, Georgia, 1988).
13. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Helene Kasser, Greenhorne & O'Mara, December 17, 1991.

14. Christopher Huff, Greenhorne & O'Mara, Population calculations, Re: Sybron Arden, March 10, 1992.
15. Trapp, Henry, Geologist, U.S. Geological Survey and Department of the Interior, Geology and Ground Water in the Asheville Area, North Carolina, Bulletin Number 16, April 1970.
16. General Soil Maps of the Buncombe County, North Carolina, U.S. Department of Agriculture, Soil Conservation Service, Asheville, North Carolina.
17. Christopher Huff, Greenhorne & O'Mara, Calculation of population on groundwater, Re: Sybron Arden site, March 10, 1992.
18. Site Inspection Field Notes, Sybron Arden site, Arden, North Carolina, NCD002221703, from Grover Nicholson, North Carolina Department of Environment, Health, and Natural Resources, Superfund Section, December 17, 1991.
19. Christopher Huff, Greenhorne & O'Mara, Telephone conversation with Nick Clemmons from the State of North Carolina Wildlife Management. Uses of the French Broad River in Buncombe County January 14, 1992.
20. Information package on the French Broad River by The North Carolina Wildlife Resources Commission, Raleigh, North Carolina.
21. Permits from Day International, air and storm water.
22. Project report from Envirochem Environmental Services Inc., on mercury fill room cleanup done in January 1989.
23. U.S. Environmental Protection Agency, 1990. Hazard Ranking System; Final Rule. 55 FR 51532, December 14, 1990.
24. U.S. Environmental Protection Agency, 1991. Superfund Chemical Data Matrix (SCDM). Office of Solid Waste and Emergency Response. Directive 9345.1-13. Revised semi-annually.
25. Memo to Superfund Section from Hal Bryson, August 17, 1992. Update on status of Well Head Protection Programs in North Carolina.
26. Federal Emergency Management Agency, Flood Insurance Rate Map Buncombe County, North Carolina, Community-Panel Number 370031 0230B, revised August 1, 1980.
27. US Geological Survey Water Data Report NC-88-1. Water Resources Data, North Carolina, Water Year 1988.
28. Memo to File from Harry Zinn on November 6, 1992. Fisheries in the vicinity of Sybron Arden.
29. Letter to Doug Holyfield, DEHNR, Solid Waste Management Division, from Romie Herring, Division of Health Services, Occupational Health Branch, Industrial Hygiene Consultant, August 16, 1989. Presence of mercury vapor in the former mercury fill room.

30. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Ed Dzierzynski, Day International, November 28, 1989. Results of testing for mercury vapor in former mercury fill room.
31. Letter to Jerry Rhodes, Department of Human Resources, Hazardous Waste Management Section, from Robert Young, Day International, January 29, 1990. Results of testing for mercury vapor in former mercury fill room and intent to discontinue testing.

REFERENCE 1

NARRATIVE SUMMARY
SYBRON ARDEN
NCD002221703

The Sybron Arden site is a 90 acre site located in Arden, North Carolina, in Buncombe County. The company built the facility in 1964 and began operations that same year. The property was vacant farmland prior to Sybron Arden.

Sybron Arden manufactures medical and scientific instruments, which includes, thermometers, hydrometers, wind scopes, stethoscopes, blood pressure guages and cups, and dental chairs. Taylor TCA, a division of Sybron which is also located at the same facility manufactures thermometers. In June of 1971 Taylor TCA disposed of approximately 14 drumloads of crushed thermometers containing residual mercury on the site. The contents of the drums were emptied into a pit with dimensions of 6'x 6'x 3.5'. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee. Test were conducted on soil samples from the disposal area and confirmed the presence of glass and mercury in the soil. On December 12, 1986, the company filed a 103 (c) notification for the on-site hazardous waste disposal area with the NC Solid and Hazardous Waste Management Branch. The company decided to do a voluntary cleanup of the pit, under the guidance of the Branch.

Waste that had been disposed of in the pit was removed along with soil from the pit. The pit was excavated from its original size of 6'x 6'x3.5' to 12'x 8'x 6' in an attempt to remove mercury that may have leached into the soils. The soil and waste removed from the pit were manifested to Emelle, Alabama for disposal. Post excavation samples were collected from the pit, after the waste removal. Sybron split samples with the NC Solid and Hazardous Waste Management Branch. Laboratory analyses indicated mercury contamination in excess of .002 ppm in a sample collected from the floor of the pit and two from the west walls of the pit. The NC Solid and Hazardous Waste Management Branch recommended additional removal of soil from the west wall and floor areas of the pit, and subsequent post-excavation sampling of the areas for extractable mercury content. Sybron Arden complied with the request. Post-excavation sampling of the west wall and floor of the pit revealed residual mercury levels were within 10 times Interim Primary Drinking Water Standards. On June 9, 1987 the NC Solid and Hazardous Waste Management Branch transmitted a letter to Sybron Arden stating that the Branch felt cleanup activities at the site were complete.

There are no records or indications that there have been other disposals at the site. There are records in the file, however, indicating that there was a spill on the site. The spill was noticed during a RCRA compliance inspection at the site on July 28, 1983. Samples of a liquid that was discovered on the ground near the hazardous waste storage area were collected and sampled by the NC Laboratory of Public Health. Laboratory analysis revealed high levels of chromium and lead in the waste sample. According to NC Solid and Hazardous Waste Management Branch files the spill was properly cleaned.

Sybron Arden is listed as a Generator under RCRA. The company generates mainly organic waste which includes: methylene chloride, 1,1,1-trichloroethane, lacquer thinner, acetone, xylene, and isopropanol. Waste mercury is also generated at the facility. All hazardous waste is transmitted off site for disposal at Groce Laboratories, Inc. in Greer, SC. There are two underground fuel tanks on the site each with a 20,000 holding capacity. There are no operable wells on the site. The company uses city water and sewage service. In July of 1987, Sybron Arden sold the facility and the Taylor TCA thermometer division to Day International in Waynesville, NC. Day International is now considered the responsible party for the facility.

Because the soil from the pit in which the residual mercury disposal occurred has been excavated, and mercury levels are now below EP Toxicity levels in the pit, a low priority for inspection is assigned to this site. Future sampling at the site, if any, should include soil sampling around the hazardous waste storage area to determine if there may have been additional spills in this area.

CM/ds/0479b/9-10

REFERENCE 2

RUDOLPH C. GABEL, INC.
39 WENDOVER RD., ROCHESTER, NEW YORK 14610
TELEPHONE 716-288-7440
FAX 716-288-6998

RECEIVED
FEB 13 1992
SUPERFUND SECTION
February 6, 1992

Mr. Grover Nicholson
North Carolina Department of
Environment, Health, and Natural Resources
Superfund Section
Post Office Box 27687
Raleigh, NC 27611-7687

FEB 20 1992

Dear Mr. Nicholson:

This is to document, at your suggestion, the main points of a discussion I had with you during your visit to Day International, 95 Glen Bridge Road, Arden, NC, to conduct a Superfund site screening investigation of the "Sybron-Arden" site, NCD 002 221 703.

During that visit, I mentioned to you that Mr. Robert Boyd, the environmental coordinator for what was then the Arden plant of the Sybron Corporation, had conducted a thorough investigation early in 1986 to determine how wastes from the Arden facility had been disposed of. As I recall it, that review was prompted in part by my scheduled visit to the facility in Spring 1986 to review their environmental compliance status. I was at that time Director of Regulatory Compliance for Sybron Corporation, and routinely visited the various Sybron facilities.

The scheduled visit never materialized since Sybron was acquired by another firm, and my function was eliminated in spring 1986 prior to my visit to Arden. Nevertheless, Boyd continued his internal review of Arden's environmental status, begun in anticipation of my visit. He had inherited the environmental responsibility after the sudden death of the previous facility environmental coordinator, and the file review was providing him with useful background information as well as helpful historical perspective.


As we have already reported to the State and the U.S. EPA, in August 1986 Boyd found a reference in a June 1971 activity log to a land burial of scrap thermometers. After finding that reference, Boyd reviewed all relevant logs and records, and in addition interviewed facility employees, in an effort to determine if any other such disposals might have occurred. The only written reference ever found was to the site already identified. The employee interviews in August - September 1986 also identified one, and only one, land disposal event - the burial of thermometer scrap under the sidewalk, the same site referred to in the June 1971 log.

The June 2, 1971 notation in the log (copy attached) indicates that there had been a fairly active discussion of the pros and cons of that on-site burial of the thermometer scrap, and the language of the log entry suggested to Boyd and to me that it had been a novel proposal rather than an established practice. Since no suggestion that another site had ever existed came out of either the records review or the employee interviews, we concluded at the time that this had been a one-time event, and represented the only on-site burial that had taken place at the facility.

As you already know, we then investigated the reported site to confirm the disposal and the precise location, reported the event to the State and the EPA, and carried out a voluntary remedial program to correct the earlier error.

I hope that this summary of the investigation conducted of other land disposal at the Arden facility is helpful. If I can furnish any other information, please advise.

Sincerely,

A handwritten signature in cursive script, reading "Rudolph C. Gabel".

Rudolph C. Gabel

cc: R. Jeffrey Harris, Esq., Sybron Vice President & General
Counsel
Bill Mincey, Day International

6/2

The lot near late 6/1 had evidence of measuring in only 11 tube, which was at the bottom of the hole.

Note: At Rooster agreed that we can bury the approx. 14 drums of scrap glass &

measuring under the sidewalk in front of B. Sam's parking space. L.C.I. removed this with W. Maudlin 6/1 and they still

agree that this is a proper method

of disposal. Jim Moody's initial suggestion

was to bury it in the new maintenance

action in the "sand box". Cooper Construction

Co. is reversing the operation of the front

sidewalk. Today, (6/2) and may get to the

action in front of B. Sam's apt. & today

(weather permitting), it is planned that

the drums of tube be dumped first, then

the crushed glass, then covered to proper

level with soil & then partitioned.

The accumulated scrap glass (with mercury)

was buried this morning under the slab

of concrete in front of the first measure

of pouring space near the emergency entrance

- B. Sam's. The estimated hole was approx.

6/2/71

6/7/71

Reinforcing mesh was used to prevent cracks. The glass & allow for a 6" slab of concrete. 6' x 6' x 3 1/2' deep. Soil was used to cover

REFERENCE 3



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

January 19, 1989

MEMORANDUM

TO: Lee Crosby, Head
Superfund/Inactive Sites Branch

FROM: Doug Holyfield, ^{DA} Supervisor
Hazardous Waste Compliance Program

RE: Referral of information: Day International (Sybron)
Request to evaluate: Oscar Carver Property - Gastonia

I have attached reports from the following sites for your review:
Day International (formerly the Sybron plant in Arden)- Upon recent construction activities at the site, liquid mercury was encountered in the foundation walls. We are coordinating disposal of any waste materials. In that this site is listed on your ERRIS list, we felt that you should be informed of our findings.

Oscar Carver Property (Gastonia) - Our investigation of this site discovered the burial of numerous drums containing hazardous constituents (paint wastes, solvents, and thinners). This activity allegedly occurred in 1972-1973. We would appreciate your investigation of this site.

In conclusion, we will be glad to assist your staff during these investigations. Please contact me, Keith Masters or Larry Fox if you should have any questions or comments.

Attachments:

cc: Keith Masters
Larry Fox
Gary Babb

To: Doug Holyfield
From: Keith O. Prokes
Subject: Day International formerly
Sylton, Arden, N.C.

On Jan. 4, 1989, I visited Day International, Glen Bridge Rd., Arden, N.C. concerning technical assistance and to check a small release of Mercury.

Day International is a manufacturer of rubber blankets for the printing industry and other rubber parts for the textile industry. They are located at a site formerly occupied by Sylton and others who manufactured thermometers.

While removing a wall in the former Mercury fill room, a small amount of Mercury was found on the floor and wall and some had gone through an expansion joint and underneath the wall. Some vapors (in relative low amounts) [information provided by Russ Holand], were detected.

At the time of my visit, the Mercury and associated building debris was being removed by a hazardous waste contractor and was to be removed from the site to an approved disposal

facility -

This facility has also had a closed up mercury disposal site located at the front entrance of the building under a walkway. CERCLA has been involved with this site -

Since this incident has arisen CERCLA may want to re-evaluate this site to determine if any more mercury is under the facility in the area of the mercury fill room. Please check this with Lee Crosby and inform her of my concern -

If further investigation is required please advise -

Copy

Lee Crosby

REFERENCE 4



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

9 December 1987

Mr. Scott Gardner
EPA NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Gardner:

RE: Preliminary Assessment Report
Sybron Arden
NCD002221703

Enclosed please find the Preliminary Assessment report for the subject site. This priority is based on review of available data.

The Sybron Arden site is a 90 acre site located in Arden, North Carolina, in Buncombe County. The company built the facility in 1964 and began operations that same year. The property was vacant farmland prior to Sybron Arden.

Sybron Arden manufactures medical and scientific instruments which includes thermometers, hydrometers, wind scopes, stethoscopes, blood pressure guages and cups, and dental chairs. Taylor TCA, a division of Sybron which is also located at the same facility manufactures thermometers. In June of 1971 Taylor TCA disposed of approximately 14 drumloads of crushed thermometers containing residual mercury on the site. The contents of the drums were emptied into a pit with dimensions of 6'x 6'x 3.5'. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee. Test were conducted on soil samples from the disposal area and confirmed the presence of glass and mercury in the soil. On December 12, 1986, the company filed a 103 (c) notification for the on-site hazardous waste disposal area with the NC Solid and Hazardous Waste Management Branch. The company decided to do a voluntary cleanup of the pit, under the guidance of the Branch.

Mr. Scott Gardner

9 December 1987

Page 2

Waste that had been disposed of in the pit was removed along with soil from the pit. The pit was excavated from its original size of 6'x 6'x3.5' to 12'x 8'x 6' in an attempt to remove mercury that may have leached into the soils. The soil and waste removed from the pit were manifested to Emelle, Alabama for disposal. Post excavation samples were collected from the pit, after the waste removal. Sybron split samples with the NC Solid and Hazardous Waste Management Branch. Laboratory analyses indicated mercury contamination in excess of .002 ppm in a sample collected from the floor of the pit and two from the west walls of the pit. The NC Solid and Hazardous Waste Management Branch recommended additional removal of soil from the west wall and floor areas of the pit, and subsequent post-excavation sampling of the areas for extractable mercury content. Sybron Arden complied with the request. Post-excavation sampling of the west wall and floor of the pit revealed residual mercury levels were within 10 times Interim Primary Drinking Water Standards. On June 9, 1987 the NC Solid and Hazardous Waste Management Branch transmitted a letter to Sybron Arden stating that the Branch felt cleanup activities at the site were complete.

There are no records or indications that there have been other disposals at the site. There are records in the file, however, indicating that there was a spill on the site. The spill was noticed during a RCRA compliance inspection at the site on July 28, 1983. Samples of a liquid that was discovered on the ground near the hazardous waste storage area were collected and sampled by the NC Laboratory of Public Health. Laboratory analysis revealed high levels of chromium and lead in the waste sample. According to NC Solid and Hazardous Waste Management Branch files the spill was properly cleaned.

Sybron Arden is listed as a Generator under RCRA. The company generates mainly organic waste which includes: methylene chloride, 1,1,1-trichloroethane, lacquer thinner, acetone, xylene, and isopropanol. Waste mercury is also generated at the facility. All hazardous waste is transmitted off site for disposal at Groce Laboratories, Inc. in Greer, SC. There are two underground fuel tanks on the site each with a 20,000 holding capacity. There are no operable wells on the site. The company uses city water and sewage service. In July of 1987, Sybron Arden sold the facility and the Taylor TCA thermometer division to Day International in Waynesville, NC. Day International is now considered the responsible party for the facility.

Because the soil from the pit in which the residual mercury disposal occurred has been excavated, and mercury levels are now below EP Toxicity levels in the pit, a low priority for inspection is assigned to this site. Future sampling at the site, if any, should include soil sampling around the hazardous waste storage area to determine if there may have been additional spills in this area.

Mr. Scott Gardner

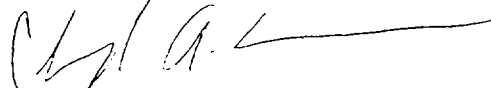
9 December 1987

Page 3

On November 24, 1987, this Preliminary Assessment was reviewed by Jerry Rhodes, Assistant Branch Head, Solid and Hazardous Waste Management Branch, NC Department of Human Resources; by CERCLA Unit personnel; and by the following representatives from the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management: Fay Sweat, Groundwater Section; Glenn Ross, Air Quality Section; and Howard Bryant, Water Quality Section.

If you have any questions, please call me at (919) 733-2801.

Sincerely,



Cheryl A. McMorris, Environmental Chemist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

CAM/pb/0479b.74

REFERENCE 5



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Sybron Arden		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 95 Glen Bridge Road			
03 CITY Arden	04 STATE NC	05 ZIP CODE 29704	06 COUNTY Buncombe	07 COUNTY CODE 11	08 CONG DIST 11
09 COORDINATES LATITUDE 35° 27' 45"		LONGITUDE 082° 31' 16"			

10 DIRECTIONS TO SITE (Starting from nearest public road)
From Raleigh, take 40 W. to Durham. In Durham take 85 S. to Greensboro. In Greensboro take 40 W. to Asheville. Stay on 40 W. until it intersects with HWY. 26. Take the HWY. 26 S. exit at the Asheville airport. Turn left onto unnamed road. Go straight to

III. RESPONSIBLE PARTIES Glen Bridge road. Turn right onto Glen Bridge Rd. Site is on the right.

01 OWNER (if known) Day International		02 STREET (Business, mailing, residential) PO Box 360			
03 CITY Waynesville	04 STATE NC	05 ZIP CODE 28786	06 TELEPHONE NUMBER (704) 456-5623		
07 OPERATOR (if known and different from owner) Day International		08 STREET (Business, mailing, residential) 95 Glen Bridge Road			
09 CITY Arden	10 STATE NC	11 ZIP CODE 29704	12 TELEPHONE NUMBER (704) 684-5178		

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ____/____/____ MONTH DAY YEAR ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 12/12/86 ☐ C. NONE
MONTH DAY YEAR MONTH DAY YEAR

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input type="checkbox"/> YES DATE ____/____/____ MONTH DAY YEAR <input checked="" type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____			
--	--	---	--	--	--

02 SITE STATUS (Check one) ☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN
03 YEARS OF OPERATION
BEGINNING YEAR 1964 ENDING YEAR presently operating ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

In June of 1971, Taylor TCA, a division of Sybron Arden disposed of approximately 14 drum loads of crushed thermometers containing residual mercury in a pit on the site. The original dimensions of the pit was approx. 6'x6'x3.5'. The pit was excavated to 12'x8'x6' in an attempt to remove all mercury that may have leached into the soils of

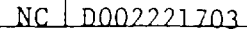
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION the pit. Soil samples collected after additional excavation revealed mercury levels below EP Toxicity. In 1983 waste oil was noticed on the site near the hazardous waste storage area. Samples collected indicated the oil was high in chromium and lead. This area was cleaned by company personnel. Two

V. PRIORITY ASSESSMENT underground 20,000 gal. fuel oil tanks on the site. City water & sewage service.

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (inspection required promptly) ☐ B. MEDIUM (inspection required) ☒ C. LOW (inspection on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Robert Boyd		02 OF (Agency Organization) Schwitzer Corporation		03 TELEPHONE NUMBER (704) 684-4000	
04 PERSON RESPONSIBLE FOR ASSESSMENT Cheryl A. McMorris		05 AGENCY DHR/DHS	06 ORGANIZATION SHW Mgmt. Br.	07 TELEPHONE NUMBER (919) 733-2801	08 DATE 10/06/87 MONTH DAY YEAR



☐ I HIGHLY VOLATILE
☐ J EXPLOSIVE
☐ K REACTIVE
☐ L INCOMPATIBLE
☐ M NOT APPLICABLE

EPA FORM 2070-12 (7-81)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION

Surface soil samples should be collected at the hazardous waste storage area to determine if additional spills occurred in the area.

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D002221705

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

REFERENCE 6



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

May 31, 1989

Mr. Dan Baucom, Head
Occupational Health Branch
Epidemiology Section
225 McDowell Street
Raleigh, North Carolina

RE: Day International - Arden, N.C.

Dear Mr. Baucom:

I have attached a brief report and a copy of analyses from the noted site for your review. Several weeks ago, Day International notified that upon breaking up foundation walls for an expansion project, they discovered Mercury in the walls and below the floor. We coordinated a cleanup effort which was initiated by EnviroChem in Apex. Recent sampling of rinsewater, etc., to determine the effectiveness of the cleanup have been reviewed. We are not satisfied that the contamination has been successfully removed and we are requiring additional core sampling of the wall area. We will continue to coordinate this activity and any subsequent hazardous waste disposal.

Our greatest concern is their attempt to re-occupy the room for normal work activities. We are not prepared to advise them on safe levels to do such. We would greatly appreciate your review of the attached data, and provide what assistance to them that you deem necessary. We will be glad to assist you in your effort. Mr. Keith Masters is our local field representative, and can be reached at (704)688-4237.

Sincerely,

A handwritten signature in cursive script, reading "R. Douglas Holyfield".

R. Douglas Holyfield, Supervisor
Hazardous Waste Compliance Program
N.C. Hazardous Waste Branch

Attachments:

cc: Lee Crosby
Keith Masters

5-9-89
9:30 a.m.

To: Doug Kelly
From: Jeff Miller
Subject: Drug Information
Cotton, 91.0.

In the act, I informed Mr. Ed Dyer that, after discussion with you and Larry Rhodes, we felt that we should be removed from the wall in the former Mercury life room. He agreed to have the sample run. He is to buy me a pound of the Hoover and Nevada.

At the present time construction work is on going in the former Mercury life room.

The production while in being done in this area, but I believe will be greatly affected in three weeks - within a week after completion of the machine taking sugar cane will begin.

Please refer to investigation sheet 95H. At any time, also that might be appropriate.

Copy to C.E.K.H. enclosed -

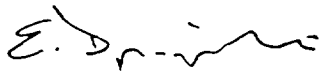
Mr. Keith Masters
North Carolina Dept. of Health Services
Division of Health Services
Rm. 100
Raleigh, North Carolina 27601-1000
Mar. 2, 1989

Mr. Hollifield:

Enclosed please find the laboratory results taken after the clean-up of the mercury contaminated area. Per your request, the lab report indicates the results of the ditch soil and rinseate water samples.

We would appreciate giving this matter your immediate attention. We are anxious to close the ditch and begin preparation for manufacturing.

Sincerely,



E. Spruill

cc: Mr. Keith Masters

- core samples
- can close the ditch
- wall check / seal
- Refer to Env. Epid.

Stord Laboratories, Inc

Analytical and Consulting Chemists

DATE RECEIVED 4-14-89
DATE REPORTED 4-24-89
8945651

1316 South Fifth Street
Wilmington, NC 28401
(319) 753-3793

PAGE 1 OF 5

ENVIRONMENTAL
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

RECEIVED APR 26 1989

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

1. A - SOIL
2. B - SOIL
3. C - SOIL
4. RINSEATE WATER
5. #1 WALL
6. #2 WALL

RESULTS

1 2 3 4 5 6

SITS: ON EPA LEACHATE
CURV, AS HG, PPM

<.0010 <.0010 .0108 X X X

GLUS: AS RECEIVED

CURV, AS HG, PPM

X X X X 4.50 X X

CURV, AS HG, TOTAL ug

X X X X X 6.53 5.47

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERC

7. #3 WALL
8. #4 WALL
9. #5 WALL
10. #6 WALL
11. #7 WALL
12. #8 WALL

RESULTS

7 8 9 10 11 12

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug 13.9 17.0 .960 3.29 5.14 2.15

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89

1316 South Fifth Street

DATE REPORTED 4-24-89

Wilmington, N.C. 28401

89W5661

(919) 763-9793

PAGE 3 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

13. #9 WALL
14. #10 WALL
15. #11 WALL
16. #12 WALL
17. #13 WALL
18. #14 RAPTER

RESULTS

13 14 15 16 17 18

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug 2.47 1.64 17.4 3.12 5.14 1.870

Oxford Laboratories, Inc.

Anal. and Consulting Chemists

DATE RECEIVED 4-13-89
DATE REPORTED 4-14-89
39W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-4700

PAGE 5 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

25. #21 RAFTER
26. #22 RAFTER

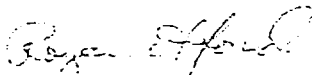
RESULTS

25 26

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug

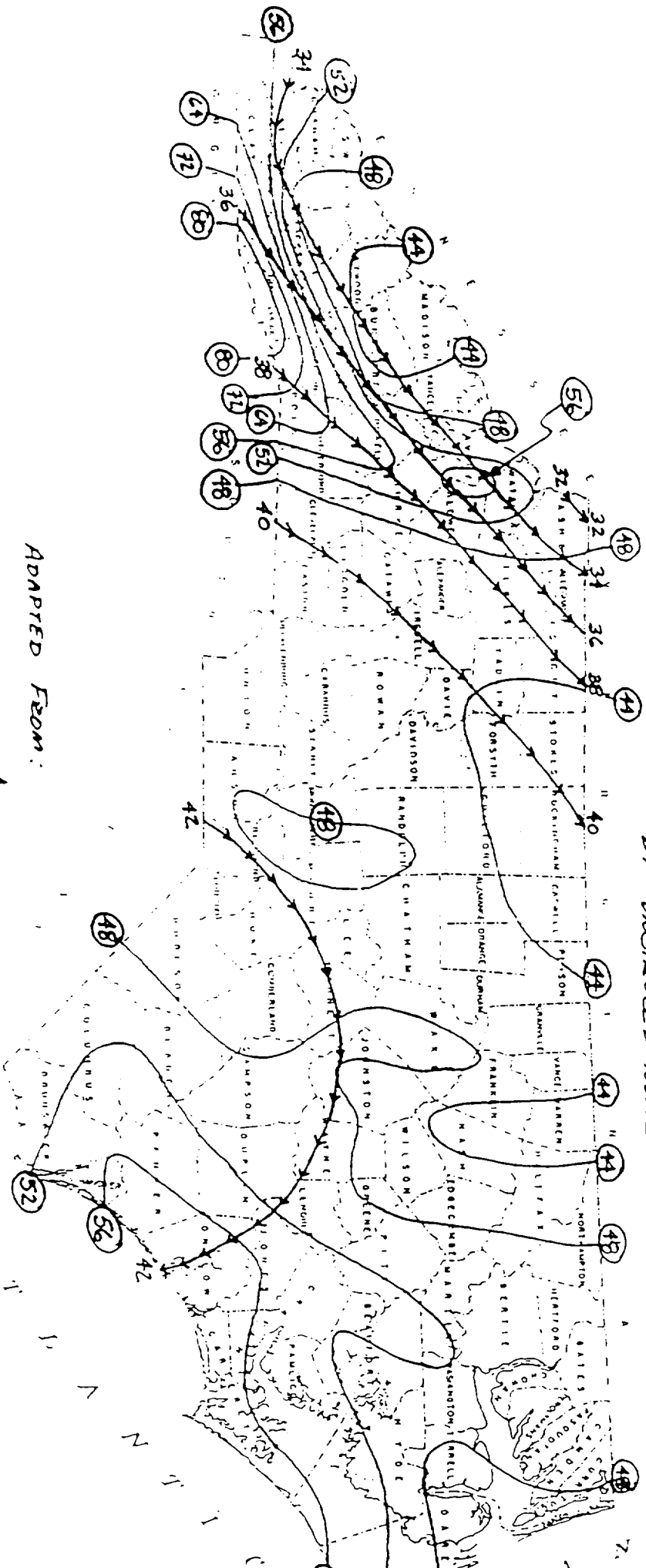
.819 .502


ROGER C. OXFORD, CHEMIST

REFERENCE 7

MEAN ANNUAL PRECIPITATION AND MEAN ANNUAL EVAPORATION

NOTE: PRECIPITATION ISOGRAMS ARE SOLID LINES (—) WITH INCHES OF RAINFALL GIVEN BY CIRCLED NUMBERS. EVAPORATION ISOGRAMS ARE NOTCHED LINES (—) WITH INCHES OF EVAPORATION GIVEN BY UNCIRCLED NUMBERS.



ADAPTED FROM:

NORTH CAROLINA ATLAS

THE UNIVERSITY OF NC PRESS,

CHAPEL HILL, NC, FIGURE

5.15 PAGE 101 AND FIGURE

5.20 PAGE 103.

Mean Annual Precip. =
Mean Annual Evap. =

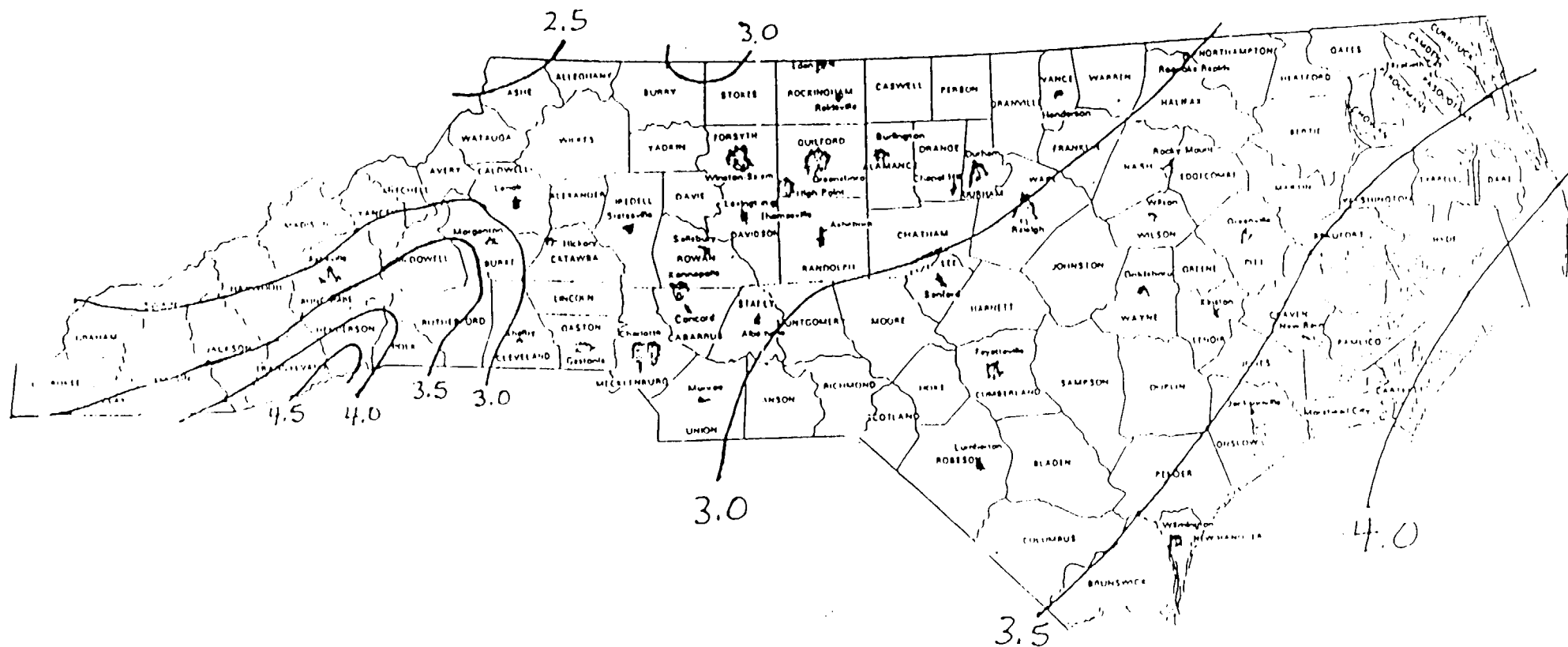
Net Annual Precip. =

REFERENCE 8

ONE-YEAR 24-HOUR RAINFALL IN INCHES

SOURCE: RAINFALL FREQUENCY ATLAS OF THE UNITED STATES,
TECH. PAPER NO. 40, U.S. DEPT. OF COMMERCE,
U.S. GOV'T PRINTING OFFICE, WASHINGTON DC, 1963.

TAKEN FROM: UNCONTROLLED HAZARDOUS WASTE SITE RANKING SYSTEM
A USERS MANUAL (HW-10) PAGE 33 FIG. 8



REFERENCE 9

PRELIMINARY EXPLANATORY TEXT FOR THE
1985 GEOLOGIC MAP OF NORTH CAROLINA

Contractual Report 88-1

by

The North Carolina Geological Survey

November 4, 1988

All of these mafic bodies are metamorphosed (Espenshade, 1963; Hadley and Goldsmith, 1963).

The rock within these bodies is usually medium-gray, medium- to coarse-grained, locally megacrystic, massive to well-foliated, variously altered hornblende metadiorite. Alteration rock types may range from amphibolite to chlorite schist.

Blue Ridge Belt

The Blue Ridge belt underlies and nearly coincides with the Blue Ridge province. It is bounded on the west in Tennessee by the Great Smoky and associated thrust faults, and on the east by the Brevard zone.

The oldest rocks of the Blue Ridge belt are Middle Proterozoic-age, massive to layered, biotite granitic to granodioritic gneisses. Intrusive into these basement complex gneisses are younger, more massive granites. These basement rocks were subsequently metamorphosed, locally to granulite grade in the Middle Proterozoic. All of the basement complex granitic gneisses are locally mylonitic. Deposited over the basement complex on a major nonconformity is a varied sedimentary sequence of great, but indeterminable, thickness. Interspersed is volcanic and plutonic material that erupted or intruded intermittently during sedimentation (Wiener and Merschat, 1977). These cover rocks were subsequently metamorphosed in the Paleozoic to a wide variety of biotite gneiss, amphibolite, two-mica schist, calc-silicate rock, and metagraywacke. All of these rocks are considered to be Late Proterozoic in age (Rankin and others, 1983).

In the southwestern corner of the State, the very Late Proterozoic Ocoee Supergroup overlies the old basement complex. It is younger and overlies most of the other cover rocks, although it may correlate with some. The youngest rocks in the Blue Ridge belt are unmetamorphosed sedimentary rocks which include the Chilhowee Group, the Shady Dolomite, and the Rome Formation. These rocks outcrop in the Hot Springs area. The Chilhowee occurs elsewhere along the State line to the northeast.

Numerous other rocks which make up the Blue Ridge belt are mostly intrusives ranging from ultramafic dunite through felsic granite and pegmatite bodies. These intrusives are Late Proterozoic to Devonian in age.

In the Blue Ridge belt, regional Paleozoic-age metamorphism increases in grade to a central zone. During this metamorphism, rocks in the core of the Blue Ridge were metamorphosed to upper amphibolite grade and to granulite grade in a small area west of Franklin, North Carolina. The western flank of the Blue Ridge belt is as low as greenschist facies, while the eastern flank is middle to upper amphibolite facies. The Grenville-age basement complex rocks were retrograded by this metamorphism. Paleozoic metamorphism probably occurred during the Taconic orogeny about 450 million years ago.

The Blue Ridge belt consists of a series of thrust sheets stacked one on another. Locally, the thrust faults bounding the sheets can be mapped at the surface. Where mapped, distinct lithologic differences are found from one side of the fault to the other. Other major structural features include large folds. Broad upwarps produce large anticlines and major anticlinoria, while broad downwarps produce large synclines and major synclinoria. Where erosion breeches these large upwarps, windows are created exposing younger

rocks in the thrust sheets below.

Ymg MIGMATITIC BIOTITE-HORNBLENDE GNEISSES

The rocks within this map unit that stretches from northwest of Asheville to Roan Mountain and beyond are highly variable and complex. They were originally mapped by Keith (1903, 1904, 1907) as part of the Cranberry Granite, Roan Gneiss, and Carolina Gneiss. The terms Roan and Carolina Gneiss have since been abandoned (Brobst, 1962) and the Cranberry Granite was redefined (Bartholomew and Lewis, 1984). Stuckey (1958) placed them in his hornblende gneiss and mica gneiss units. Bryant and Reed's mixed rocks unit coincides with the migmatitic biotite-hornblende gneiss outside the west side of the Grandfather Mountain window. Hadley and Nelson (1971) included the migmatitic biotite-hornblende gneiss in their layered gneiss and migmatite unit. Rankin and others (1972) mapped these rocks as part of the Elk Park plutonic group, but also included a large number of mafic dikes and sills from the Crossnore plutonic-volcanic group within the outcrop area. On the Mars Hill Quadrangle, Mersch (1977) first described and defined the unit as depicted on the 1985 State Geologic Map. Brewer (1986) mapped this unit as the amphibolite basement complex. Mersch and Wiener (1988) subdivided this unit into the Earliest Gap Biotite Gneiss and the Sandymush Felsic Gneiss near Canton, North Carolina.

The migmatitic biotite-hornblende gneiss consists of layered mafic and felsic rocks interlayered and gradational at all scales. Thickness ranges from inches to mappable units a thousand feet or more. The rocks are low in quartz content and contain almost no muscovite or aluminosilicate minerals. They exhibit a nematoblastic to granoblastic to lepidoblastic texture. Rocks within this unit were metamorphosed to granulite grade during the Proterozoic (Mersch, 1977; Kuchenbuch, 1979; Gulley, 1982; Monrad and Gulley, 1983; and Gulley, 1985). The granulite-grade rocks were variably retrograded by Taconic metamorphism (Mersch and Wiener, 1988).

This heterogeneous map unit consists of layers of biotite granitic gneiss, amphibolite, calc-silicate granofels, rare marble, biotite gneiss, biotite-hornblende gneiss, hypersthene-biotite-hornblende gneiss, hypersthene granitic gneiss, pyroxene granulite, hypersthene-plagioclase rock, hypersthene granitic gneiss, and many others (Bryant and Reed, 1970; Mersch, 1977; Gulley, 1982; and Brewer, 1986). Concentrated areas of migmatization are common throughout the map unit (Bryant and Reed, 1970; Mersch, 1977; and Brewer, 1986).

The high mafic mineral and low quartz content of many of the layers makes this unit moderately incompetent and weakly resistant to chemical weathering.

Ymam AMPHIBOLITE

Discontinuous layers, lenses and pods of amphibolite occur throughout the migmatitic biotite-hornblende gneiss unit. They vary in thickness from inches to mappable bodies. Most are concordant to other layers, but locally small dike-like bodies occur. Although they occur throughout the unit, they are shown only in the Mars Hill and Leicester Quadrangles where Mersch (1977) and Wiener (unpublished data) mapped them in detail. More recent mapping by Mersch and Wiener (1988) includes amphibolites within the Earliest Gap Biotite Gneiss, a subunit within the migmatitic biotite-hornblende

Zco COWEETA GROUP

The Coweeta Group was formalized by Hatcher (1979) for exposures in the headwaters of Coweeta Creek and its tributaries in and around the Coweeta Hydrologic Laboratory, Macon County, North Carolina. The Coweeta Group is distinguished only on the Prentiss Quadrangle (Hatcher, 1980) and Wayah Bald Quadrangle (Eckert, 1984), and its use on the 1985 State Map is restricted to the Coweeta area. The Coweeta Group is a sequence of metasedimentary rocks with a discontinuous metamorphosed quartz diorite unit at the base. Minor amphibolite occurs locally. Hatcher (1979) subdivided the Coweeta Group into three formations. The basal quartz diorite unit, the Persimmon Creek Gneiss, is an equigranular, coarse-grained, oligoclase-quartz-biotite gneiss interlayered with metasandstone and mica schist. Overlying the Persimmon Creek Gneiss is the Coleman River Formation which consists of medium-grained metasandstone, meta-arkose, and quartz feldspar gneiss with interlayers of coarse, pelitic schist. The upper formation of the Coweeta Group is the Ridgepole Mountain Formation which consists of pelitic schist, coarse biotite-garnet schist, quartzite, muscovite-chlorite quartzite, garnetiferous metasandstone, and all gradations in between.

The quartz-rich rocks of the Coweeta Group are competent and resistant to weathering and erosion. The schists are incompetent and weakly resistant to weathering and erosion.

ASHE METAMORPHIC SUITE AND TALLULAH FALLS FORMATION

The Ashe Metamorphic Suite and Tallulah Falls Formation map unit is a large group of metasedimentary and mafic metavolcanic rocks that lies nonconformably on granitic basement. This unit resulted from correlating and combining formal units, the Ashe Metamorphic Suite from northwestern North Carolina, and the Tallulah Falls Formation from Georgia, North Carolina, and South Carolina. On the 1985 State Map five informal lithologic units provide internal detail. The metagraywacke map unit is separated from other parts of the Ashe-Tallulah Falls because of its retention of original sedimentary appearance including massive to thick layering, high quartz content, and metaconglomeratic layers. Muscovite-biotite gneiss and Mica schist are two subunits of the Ashe Metamorphic Suite in its type area along with amphibolite. The Biotite gneiss map unit is an extension of the Tallulah Falls Formation into North Carolina from its type area in Georgia. The Amphibolite unit is common to both map units.

The Ashe Metamorphic Suite was originally named the Ashe Formation by Rankin (1970) for extensive exposures in Ashe County, North Carolina. Abbott and Raymond (1984) referred to the same rocks as the Ashe Metamorphic Suite due to their lithologic heterogeneity and structural complexity. Keith (1903), Bryant (1962, 1963), Bryant and Reed (1970), Rankin (1970), Rankin and others (1972, 1973), Butler (1973), and Abbott and Raymond (1984) all agree that the rocks in and around the type area of the Ashe correlate with rocks southwest of the Grandfather Mountain window in the Spruce Pine district. This is the interpretation used on the present State Map.

The Tallulah Falls Formation was redefined by Hatcher (1971) for rocks previously called the Tallulah Falls Quartzite (Galpin, 1915) and Whetstone Group (Hatcher, 1969) in northeast Georgia. Hatcher (1971) made the

quartzite a member and included three additional members. However, detailed mapping by Marr (1975), Wickstrom (1979), Acker (1982), Horton (1982), and Witherspoon (1982) did not establish in North Carolina the presence of the four members of the Tallulah Falls Formation described by Hatcher (1971).

Zata Amphibolite -- Amphibolite of the Ashe Metamorphic Suite and Tallulah Falls Formation is shown to occur in three distinct areas of the 1985 State Geologic Map. The area northwest of the Grandfather Mountain window is the type area of the Ashe Metamorphic Suite. Amphibolite crops out over 50 percent of the mapped area (Rankin and others, 1972). Detailed mapping in portions of this area (Jones, 1976; Bartholomew, 1983; and Bartholomew, in preparation) shows extensive areas of amphibolite. Southwest of the Grandfather Mountain window in the Spruce Pine mining district, the compilation map by Brobst (1962) shows numerous large amphibolite areas. In Transylvania, Jackson and Macon Counties, Livingston (1966), McNiff (1967), and Livingston and McNiff (1969) map numerous amphibolites within the biotite gneiss unit of the Ashe Metamorphic Suite and Tallulah Falls Formation. Detailed mapping by Marr (1975), Wickstrom (1979), Horton (1982), and Witherspoon (1982) refined the mapping of Livingston and McNiff and also shows the abundant amphibolites of the biotite gneiss unit.

Protoliths for the amphibolite of the Ashe Metamorphic Suite and Tallulah Falls Formation are thought to be basalts (Bryant and Reed, 1970; Nelson, 1969; and Rankin and others, 1973). They are most likely flows and pyroclastic deposits of basaltic composition. A slight possibility for sedimentary amphibolites exists (Rankin, 1970).

The amphibolite unit of the Ashe Metamorphic Suite and Tallulah Falls Formation consists of equigranular, massive- to well-foliated amphibolite, garnet- amphibolite, and hornblende gneiss layers, lenses and pods. The amphibolite is usually conformable and variably interlayered with muscovite-biotite gneiss, metagraywacke, and mica schist.

The amphibolite unit is a competent rock that weathers deeply and rapidly.

Zatb Biotite Gneiss -- The biotite gneiss unit of the Ashe Metamorphic Suite and Tallulah Falls Formation crops out in southwestern North Carolina in Transylvania, Jackson, Macon, and Haywood Counties. This map unit correlates with and extends into the type Tallulah Falls Formation, as defined and mapped by Hatcher (1971), in Rabun and Habersham Counties, Georgia.

The biotite gneiss unit consists of light-gray to medium-dark-gray, medium- to coarse-grained, medium- to thick-layered biotite gneiss. The biotite gneiss layers are interlayered and intergraded with biotite-garnet-gneiss, biotite-muscovite schist, garnet-mica schist, and amphibolite. As the mica content and feldspar content decreases, the layers thicken and resemble metagraywacke. The cleanest layers (least mica and feldspar) are quartzites.

The biotite gneiss unit is a heterogeneous unit. Those layers with a high quartz content are competent and more resistant to weathering.

Zats Mica Schist -- Although mica schist layers occur throughout the Ashe Metamorphic Suite and Tallulah Falls Formation, the mica schist unit is mapped only northwest of the Grandfather Mountain window. The mica schist

unit depicted on the 1985 Geologic Map follows the reconnaissance map by Rankin and others (1972). Elsewhere in this region detailed mapping of the Warrensville (Jones, 1976), Jefferson (Jones, 1976), Baldwin Gap (Bartholomew, 1983), and Zionville (Bartholomew, in preparation) Quadrangles, shows the mica schist layers are not sufficiently concentrated to form mappable bodies.

In the two areas where the mica schist unit is mapped separately, it still contains interlayers of muscovite-biotite gneiss, metagraywacke, and amphibolite. The unit consists primarily of medium-light-gray to medium-dark-gray, thin- to medium-layered, well-foliated, sulfidic, and locally graphitic muscovite-biotite schist. The common accessory minerals are garnet and staurolite or kyanite, depending on the metamorphic grade.

The mica schist unit is an incompetent unit that is slightly resistant to chemical weathering especially where the biotite content is high.

Zatm Muscovite-Biotite Gneiss -- The muscovite-biotite gneiss unit of the Ashe Metamorphic Suite and Tallulah Falls Formation is very widespread. It extends from the Virginia line through the type area and reappears across the Grandfather Mountain window in the central and southern Blue Ridge of western North Carolina. The gneiss unit is a very heterogeneous unit dominated by a thick sequence of marine clastic metasedimentary rock. The protoliths are chiefly graywackes containing numerous shale partings and thicker shale beds and lenses. Interlayered mafic rock consists of tholeiitic basalts, now metamorphosed to amphibolite.

The muscovite-biotite gneiss unit is typically medium light gray to medium dark gray, fine- to medium-grained, thin- to thick-layered, and sulfidic. It is interlayered and intergraded with mica schist and minor metagraywacke at all scales. The thicker and more graywacke-like layers are locally conglomeratic. Graphitic schists are rare. Calc-silicate granofels are scattered throughout the gneiss unit and probably represent limy beds and lenses (Rankin, 1970). Thin layers of amphibolite, derived from mafic volcanics, occur sporadically throughout the unit.

The muscovite-biotite gneiss unit is competent and relatively resistant to weathering, although local variations exist, depending on the precise mineralogy. Those layers high in feldspar and mica content are more susceptible to weathering than those with a high quartz content.

Zatw Metagraywacke -- The metagraywacke unit of the Ashe Metamorphic Suite and Tallulah Falls Formation is depicted in one area on the 1985 Geologic Map. This area underlies the very rugged terrain associated with the Black Mountains, including Mount Mitchell, the highest mountain in the eastern United States, the adjacent Great Craggy Mountains, and the Swannanoa Mountains. This subunit is unique to the 1985 Geologic Map, although some of the rock's distinctive characteristics were recognized previously in maps and reports by Keith (1905), Butler (1972), Nelson (1972, 1974), and Merschat (in preparation). In particular, they recognized metasandstones, metagraywackes, metaconglomerates, and dark, graphitic, sulfidic slates and schists within their map areas, and referred to the strata more readily in sedimentary rock terms rather than in high-grade metamorphic rock terminology.

The metagraywacke unit consists of medium-light-gray to

medium-dark-gray, fine- to coarse-grained, massive to thinly layered, weakly foliated to well-foliated metagraywacke. The metagraywacke layers are interlayered and gradational with high-metamorphic grade, sulfidic metapelites, muscovite-biotite gneisses, and rare graphitic schists. The metagraywacke is locally conglomeratic. The conglomeratic layers on Swannanoa Mountain may be graded (Nelson, 1972). The quartz pebbles in the conglomerates are strongly deformed (Butler, 1972). High quartz content, massive appearance, and sedimentary nature characterize this unit. It is a competent, highly resistant rock.

ALLIGATOR BACK FORMATION

The Alligator Back Formation was named by Rankin and others (1973) for exposures along the Alligator Back erosional scarp of Bluff Mountain on the Whitehead 7.5 Minute Quadrangle, Alleghany County, North Carolina. The Alligator Back was originally included as part of the Ashe Metamorphic Suite by Rankin (1970). In mapping the western half of the Winston-Salem 1° x 2° sheet, Rankin and others (1972) mapped what is now designated the Alligator Back Formation as an informal, unnamed unit of laminated mica gneiss and schist. On the 1985 State Geologic Map, the Alligator Back is mapped both northeast and southwest of the Grandfather Mountain window and is divided into three lithologic units. Each map unit is dominated by, but not limited to, a single lithologic type. To the northeast, including the type area of the Alligator Back, all three major rock types, gneiss, schist and amphibolite, are mapped. To the southeast, only gneiss and amphibolite are mapped.

Zabg Gneiss -- The gneiss unit of the Alligator Back Formation is the most extensive. In North Carolina the unit is typically a thinly laminated to thin-bedded, fine-grained, quartzo-feldspathic gneiss with thin, micaceous partings. It is interlayered with schist, gneiss, and amphibolite layers. Layers of micaceous granule metaconglomerate occur locally. Where metamorphic effects are not pronounced, rocks in this unit are more suitably called thin-layered metagraywacke, rather than gneiss. Rankin (1970), Rankin and others (1972), and Rankin and others (1973) state that the gneiss of the Alligator Back is more micaceous than the gneiss of the Ashe Metamorphic Suite. Calc-silicate lenses are also locally abundant in the Alligator Back and its gneiss is locally sulfidic (Rankin and others, 1973). Tourmaline is a common accessory mineral of the Alligator Back Formation as compared to the rocks of the underlying Ashe Metamorphic Suite (Rankin and others, 1973).

The gneiss layers (metagraywacke) are competent layers and resistant to weathering.

Zabs Mica Schist and Phyllite -- Mica schist layers are interlayered with the more extensive gneissic rock throughout the Alligator Back Formation in western North Carolina. Northeast of the Grandfather Mountain window fine-grained, metapelitic rock dominates outcrops over large enough areas to constitute mappable bodies on the State Geologic Map. The mica schist unit consists of medium-gray to light-bluish-gray muscovite schist that is commonly biotitic, chloritic, graphitic and sulfidic. Interlayers of muscovite-biotite gneiss and amphibolite are common. Quartzite and calcareous layers occur in the outcrop area east of the Grandfather Mountain window (Rankin and others, 1973). Garnet, kyanite, magnetite, and tourmaline are common accessory minerals. Where metamorphism is less intense, phyllite may occur instead of mica schist. The thickest schist unit shown on the 1985 State

REFERENCE 10

Table 6. Household, Family, and Group Quarters Characteristics: 1990

For definitions of terms and meanings of symbols, see text.

State County Place and (In Selected States) County Subdivision	Family households					Nonfamily households					Persons per—		Persons in group quarters		
	Persons in households	All house- holds	Total	Married- couple family	Female house- holder, no husband present	Total	Householder living alone				Family	Total	Insti- tutional- ized persons	Other per- sons in group quarters	
							Total	Total	Females	Household					
The State	6 404 187	2 517 028	1 812 053	1 424 208	308 878	704 873	504 808	228 384	182 329	2.54	3.03	224 470	83 430	141 070	
COUNTY															
Alamance County	105 307	42 652	37 745	24 295	5 130	11 907	10 467	4 568	3 748	2.47	2.64	2 886	1 173	1 713	
Alexander County	27 245	10 331	9 048	5 048	1 715	2 285	2 222	832	651	2.64	3.02	259	120	136	
Alleghany County	9 341	3 854	2 820	2 421	303	1 065	990	532	443	2.41	2.88	255	120	136	
Anson County	23 117	8 521	6 359	4 552	1 411	2 172	2 042	1 075	862	2.71	3.23	357	344	13	
Ashie County	21 965	8 648	6 748	5 643	1 711	2 100	1 635	1 014	806	2.48	2.84	244	230	14	
Avery County	13 919	5 520	4 162	3 300	480	1 358	1 229	549	420	2.52	2.95	549	230	319	
Beaufort County	41 704	16 157	11 840	8 140	2 186	4 317	3 915	1 774	1 606	2.12	3.07	579	441	138	
Bertie County	20 321	7 412	5 501	3 831	1 416	1 911	1 757	957	755	2.4	3.23	67	67	—	
Bladen County	28 150	10 760	8 017	5 854	1 782	2 743	2 578	1 243	1 000	2.2	3.11	513	529	4	
Brunswick County	50 467	20 089	15 251	12 636	2 031	4 778	4 227	1 640	1 194	2.52	2.91	468	307	161	
Buncombe County	156 713	70 822	46 335	36 637	7 864	21 467	18 868	8 174	6 642	2.40	2.50	5 128	2 966	2 162	
Burke County	73 281	29 184	21 711	17 482	3 148	7 473	6 506	2 706	2 228	2.51	2.83	2 463	2 410	53	
Cabarrus County	67 255	37 515	28 367	23 270	3 972	9 148	8 036	3 509	2 971	2.52	3.22	1 680	1 235	457	
Caldwell County	89 917	27 172	20 656	16 653	2 644	6 516	5 660	2 287	1 846	2.57	2.77	732	735	57	
Camden County	5 875	2 180	1 682	1 385	225	488	437	224	189	2.86	3.11	26	—	29	
Carteret County	51 554	21 238	15 276	12 691	2 021	5 082	5 081	1 801	1 431	2.43	2.88	1 002	750	252	
Caswell County	20 053	7 468	5 781	4 554	1 224	1 687	1 563	727	573	2.86	3.1	840	624	16	
Catawba County	116 387	45 700	33 773	27 418	4 841	11 927	10 270	3 844	3 115	2.55	2.96	2 025	1 134	891	
Chatham County	38 315	15 203	11 227	8 415	1 605	4 066	3 445	1 412	1 141	2.51	2.95	444	371	67	
Cherokee County	19 899	7 966	6 086	5 055	785	1 807	1 784	675	559	2.50	2.91	271	276	—	
Chowan County	13 233	5 113	3 775	2 842	787	1 338	1 236	641	499	2.59	3.27	273	273	—	
Citrus County	7 150	2 928	2 177	1 684	253	731	699	418	314	2.44	2.80	5	—	—	
Cleveland County	83 012	30 037	24 082	19 011	4 168	7 556	7 011	3 202	2 624	2.52	3.22	1 702	815	787	
Columbus County	48 901	18 458	13 754	10 381	2 757	4 705	4 351	2 152	1 866	2.63	3.15	624	624	10	
Currituck County	79 014	29 542	22 481	18 186	3 511	7 061	6 121	2 436	1 830	2.84	3.07	3 506	811	2 786	
Cumberland County	253 382	91 500	69 866	54 433	10 437	21 534	17 718	4 724	3 732	2.77	3.19	21 204	1 496	19 705	
Dartmouth County	13 466	5 038	3 854	3 072	407	1 184	964	419	312	2.58	3.08	250	211	39	
Dare County	22 542	9 340	6 425	5 468	682	2 924	2 284	714	522	2.41	2.88	319	142	64	
Davidson County	125 358	48 944	37 178	30 410	5 120	11 788	10 262	4 189	3 316	2.56	2.96	1 319	1 117	42	
DeWitt County	27 541	10 785	8 270	6 906	953	2 515	2 242	1 025	817	2.55	2.95	318	256	30	
DuChes County	39 368	14 925	11 036	8 176	2 096	3 880	3 553	1 779	1 436	2.54	3.12	627	560	67	
Durham County	173 310	72 297	45 965	32 414	10 321	26 312	21 907	9 553	4 471	2.40	2.96	8 525	2 175	6 350	
Edgecombe County	55 856	20 316	15 085	10 000	4 263	5 234	4 702	2 124	1 717	2.75	3.20	622	657	45	
Fernbach County	257 466	107 419	72 621	55 715	14 052	34 798	28 870	9 779	7 975	2.40	2.94	8 412	3 493	4 919	
Franklin County	35 237	13 503	10 047	7 640	1 865	3 456	3 120	1 384	1 128	2.81	3.07	1 177	568	609	
Gaston County	172 791	65 347	48 754	38 905	8 300	15 503	13 580	5 700	4 720	2.64	3.27	2 352	1 458	894	
Gates County	9 202	3 352	2 563	2 040	404	759	755	364	288	2.75	3.19	103	102	1	
Graham County	7 178	2 772	2 166	1 839	244	448	406	244	225	2.54	2.96	20	18	2	
Granville County	35 191	13 134	9 483	7 501	1 857	3 281	2 889	1 236	978	2.68	3.1	3 154	3 079	75	
Greene County	14 665	5 395	4 066	3 023	875	1 329	1 186	574	481	2.72	3.18	174	174	—	
Guilford County	335 348	137 706	92 891	71 195	17 570	44 815	36 578	12 180	9 951	2.44	2.97	12 072	3 094	8 988	
Hall County	54 122	20 335	14 874	11 292	4 018	5 461	5 025	2 368	1 957	2.66	3.18	1 364	1 356	36	
Hatteras County	42 340	25 150	18 529	14 499	3 154	6 821	5 722	2 138	1 725	2.42	2.92	1 242	1 242	—	
Henderson County	46 152	19 211	14 120	11 801	1 774	5 061	4 601	2 337	1 886	2.46	2.83	750	751	36	
Hertford County	84 206	28 706	21 169	15 113	2 344	7 540	6 836	3 531	2 856	2.30	2.80	1 079	907	112	
Hillsboro County	21 612	8 150	5 921	4 464	1 73	2 225	2 063	1 077	764	2.86	3.18	911	779	132	
Hoke County	21 612	7 405	5 704	3 847	1 605	1 611	1 419	523	420	2.32	3.34	1 244	1 244	—	
Hyde County	5 383	2 004	1 533	1 151	301	561	516	269	211	2.57	3.07	28	16	9	
Irwin County	62 082	35 573	28 869	21 706	4 023	8 704	7 646	3 271	2 652	2.54	3.02	846	814	35	
Jackson County	22 834	9 683	6 970	5 748	581	2 713	2 242	966	745	2.46	2.91	3 012	280	2 732	
Johnston County	80 341	31 588	23 217	18 566	3 834	8 348	7 441	3 380	2 750	2.55	3.01	965	863	72	
Jones County	9 412	3 482	2 638	2 034	482	774	704	406	311	2.71	3.17	2	2	—	
Lee County	40 651	15 686	11 739	9 087	2 135	3 950	3 482	1 386	1 107	2.56	3.22	723	672	51	
Lincoln County	58 652	20 338	15 811	11 331	3 798	8 327	7 706	2 580	2 073	2.54	3.08	1 422	1 354	87	
Lenoir County	40 802	18 784	14 661	12 027	1 827	4 103	3 580	1 667	1 373	2.65	3.23	1 117	1 117	—	
Madison County	35 064	13 680	10 366	8 576	1 363	3 314	2 906	1 309	1 135	2.56	2.99	617	418	201	
Macon County	22 992	9 634	7 235	5 990	2 388	2 388	1 307	1 021	824	2.78	3.07	507	233	274	
Madison County	16 104	6 688	4 803	4 008	516	1 682	1 510	789	581	2.48	2.92	846	574	745	
McHenry County	24 813	9 317	6 900	5 087	1 518	2 417	2 213	1 100	906	2.56	3.17	255	257	9	
Mecklenburg County	498 888	220 219	154 361	103 211	25 013	65 858	52 037	12 900	10 510	2.50	3.05	11 547	578	7 966	
Mitchell County	14 288	5 771	4 420	3 777	479	1 358	1 283	669	539	2.47	2.88	187	130	15	
Monroe County	22 279	8 290	6 274	4 623	1 119	2 018	1 838	876	690	2.66	3.14	1 067	927	140	
Morris County	58 010	23 827	17 483	14 312	2 470	6 344	5 662	2 744	2 201	2.43	2.87	1 032	970	53	
Muskegon County	75 450	29 041	21 224	16 322	3 968	7 817	6 926	2 880	2 316	2.60	3.00	1 237	677	560	
New Hanover County	116 986	48 136	32 426	24 436	5 159	15 738	14 236	4 272	3 512	2.43	2.95	3 235	1 321	1 914	
Northampton County	20 055	7 591	5 644	4 594	1 436	1 947	1 816	754	624	2.64	3.13	743	742	1	
Onslow County	115 274	40 658	32 971	25 037	3 643	7 687	6 271	1 752	1 364	2.84	3.16	34 564	954	33 610	
Orange County	84 627	36 104	21 123	16 854	3 380	14 891	10 110	2 257	1 836	2.34	2.93	6 224	770	8 454	
Person County	11 217	4 523	3 352	2 717	547	1 141	1 055	528	410	2.42	2.93	123	112	12	
Piedmont County	29 884	11 344	8 326	6 356	1 871	3 058	2 725	1 342	1 065	2.52	3.13	1 414	383	1 031	
Pender County	28 467	11 112	8 420	6 727	1 371	2 892	2 386	1 055	796	2.56	2.94	358	348	10	
Perquimans County	10 203	3 898	2 938	2 444	484	950	872	443	342</						

REFERENCE 11

SEE FIGURE 3 IN APPENDIX A

REFERENCE 12

ENDANGERED AND THREATENED SPECIES



U.S. FISH AND WILDLIFE SERVICE
REGION 4 - ATLANTA

12/87

Federally Listed Species by State

NORTH CAROLINA

(E=Endangered; T=Threatened; CH=Critical Habitat determined)

Mammals

General Distribution

Bat, gray (<u>Myotis grisescens</u>) - E	Extreme Southwest
Bat, Indiana (<u>Myotis sodalis</u>) - E	West
Bat, Virginia big-eared (<u>Plecotus townsendii virginianus</u>) - E	Avery County
Cougar, eastern (<u>Felis concolor cougar</u>) - E	Entire state
Manatee, West Indian (<u>Trichechus manatus</u>) - E	Coastal waters
Shrew, Dismal Swamp southeastern (<u>Sorex longirostris fisheri</u>) - T	Dismal Swamp; Camden, Gates Pasquotank and Perquimans Counties

Squirrel, Carolina northern flying
(Glaucomys sabrinus coloratus) - E

Western mountains
(Yancy County)

Whale, finback (Balaenoptera physalus) - E
Whale, humpback (Megaptera novaeangliae) - E
Whale, right (Balaena glacialis) - E
Whale, sei (Balaenoptera borealis) - E
Whale, sperm (Physeter catodon) - E

Coastal waters
Coastal waters
Coastal waters
Coastal waters
Coastal waters

Birds

Eagle, bald (Haliaeetus leucocephalus) - E
Falcon, American peregrine
(Falco peregrinus anatum) - E
Falcon, Arctic peregrine
(Falco peregrinus tundrius) - T
Plover, piping (Charadrius melodus) - T
Stork, wood (Mycteria americana) - E
Warbler, Bachman's (Vermivora bachmanii) - E
Warbler, Kirtland's
(Dendroica kirtlandii) - E

Entire state
Western mountains
Entire State
Coast
Coast
East
Northwest, Central,
Southeast

Woodpecker, ivory-billed
(Campephilus principalis) - E
Woodpecker, red-cockaded
(Picoides (=Dendrocopos) borealis) - E

Southeast
East

NORTH CAROLINA (Cont'd)

State Lists 12/87

Reptiles

Alligator, American (<u>Alligator mississippiensis</u>) - T (S/A)*	Coastal plain
Turtle, Kemp's (Atlantic) ridley (<u>Lepidochelys kempi</u>) - E	Coastal waters
Turtle, green (<u>Chelonia mydas</u>) - T	Coastal waters
Turtle, hawksbill (<u>Eretmochelys imbricata</u>) - E	Coastal waters
Turtle, leatherback (<u>Dermochelys coriacea</u>) - E	Coastal waters
Turtle, loggerhead (<u>Caretta caretta</u>) - T	Coastal waters

Fishes

Chub, spotfin (<u>Hybopsis monacha</u>) - T, CH	Little Tennessee River, Swain and Macon Counties
Shiner, Cape Fear (<u>Notropis mekistocholas</u>) - E, CH	Randolph, Moore, Lee, and Chatham Counties
Silverside, Waccamaw (<u>Menidia extensa</u>) - T	Lake Waccamaw and Upper Waccamaw R., Columbus County
Sturgeon, shortnose (<u>Acipenser brevirostrum</u>) - E	Coastal rivers

Mollusks

Mussel, Tar River spiny (<u>Elliptio</u> (<u>Canthya</u>) <u>steinmansana</u>) - E	Tar River, Edgecombe County; Sandy Creek, Franklin County; Swift Creek, Nash County
Snail, noonday (<u>Mesodon clarki nantahala</u>) - T	Swain County

Plants

<u>Hudsonia montana</u> (mountain golden heather) - T, CH	Burke and McDowell Counties
<u>Isotria medeoloides</u> (small whorled pogonia) - E	Macon and Henderson Counties

*Alligators are biologically neither endangered nor threatened. For law enforcement purposes they are classified as "Threatened due to Similarity of Appearance." Alligator hunting is regulated in accordance with State law.

NORTH CAROLINA (Cont'd)

State Lists 12/87

Liatris helleri (Heller's blazing
star) - T

Ashe, Avery, Caldwell,
Burke Counties
Bladen County

Lindera melissifolia (pondberry) - E
Lysimachia asperulaefolia
(rough-leaved loosestrife) - E

Carteret, Scotland,
Cumberland/Bladen,
Brunswick, Pender, and
Hoke Counties
Scotland County

Oxypolis canbyi (Canby's dropwort) - E
Sagittaria fasciculata
(bunched arrowhead) - E

Henderson County

Sarracenia oreophila
(green pitcher plant) - E

Clay County

Solidago spithamea
(Blue Ridge goldenrod) - T

Avery and Mitchell Counties

NORTH CAROLINA - Critical Habitat

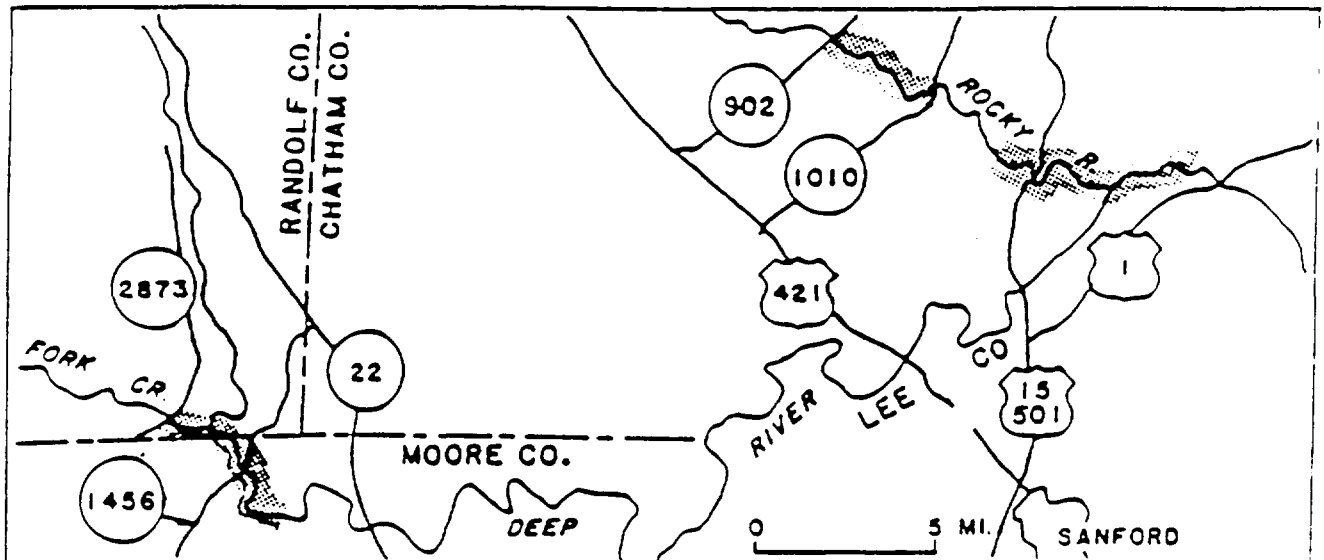
Notropis mekistocholas, "Cape Fear shiner"

(1) Chatham County. Approximately 4.1 miles of the Rocky River from North Carolina State Highway 902 Bridge downstream to Chatham County Road 1010 Bridge;

(2) Chatham and Lee Counties. Approximately 0.5 river mile of Bear Creek, from Chatham County Road 2156 Bridge downstream to the Rocky River, then downstream in the Rocky River (approximately 4.2 river miles) to the Deep River, then downstream in the Deep River (approximately 2.6 river miles) to a point 0.3 river mile below the Moncure, North Carolina, U.S. Geological Survey Gaging Station; and

(3) Randolph and Moore Counties. Approximately 1.5 miles of Fork Creek, from a point 0.1 river mile upstream of Randolph County Road 2873 Bridge downstream to the Deep River then downstream approximately 4.1 river miles of the Deep River in Randolph and Moore Counties, North Carolina, to a point 2.5 river miles below Moore County Road 1456 Bridge.

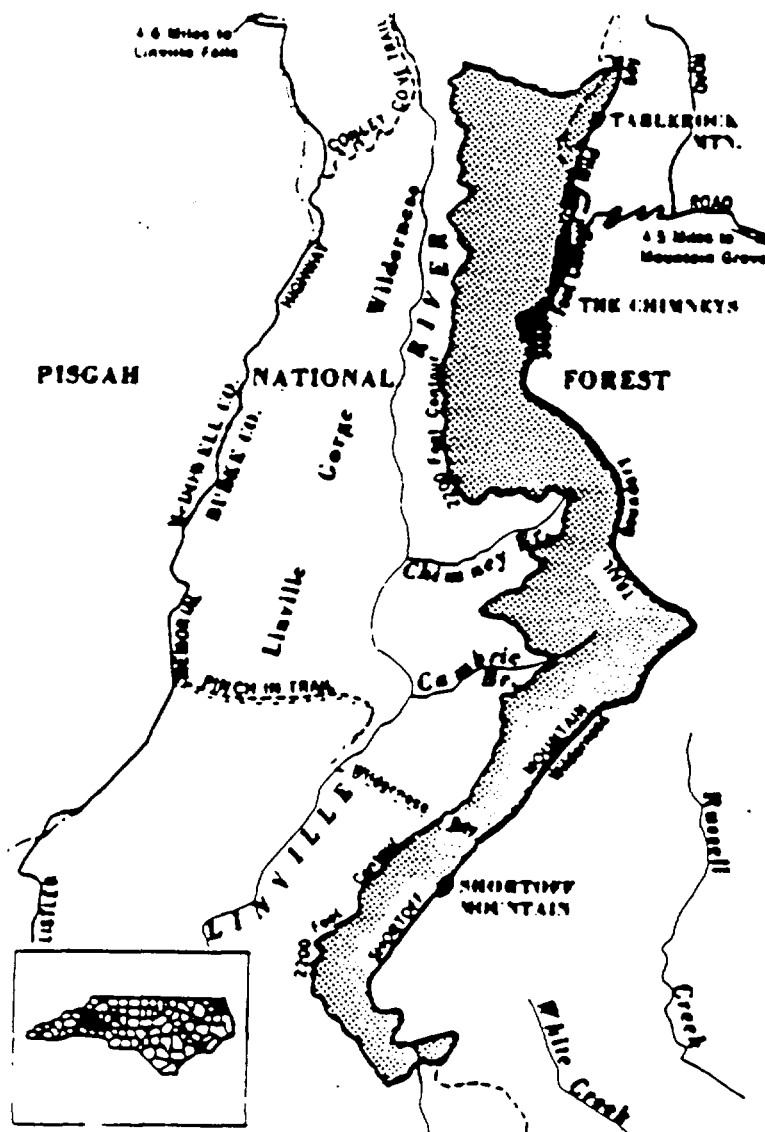
Constituent elements include clean streams with gravel, cobble, and boulder substrates with pools, riffles, shallow runs and slackwater areas with large rock outcrops and side channels and pools with water of good quality with relatively low silt loads.



NORTH CAROLINA - Critical Habitat

Hudsonia montana, "mountain golden heather"

Burke County. The area bounded by the following: on the west by the 2200' contour; on the east by the Linville Gorge Wilderness Boundary north from the intersection of the 2200' contour and the Shortoff Mountain Trail to where it intersects the 3400' contour at "The Chimneys"--then follow the 3400' contour north until it reintersects the Wilderness Boundary--then follow the Wilderness Boundary again northward until it intersects the 3200' contour extending west from its intersection with the Wilderness Boundary until it begins to turn south--at this point the Boundary extends due east until it intersects the 2200' contour.

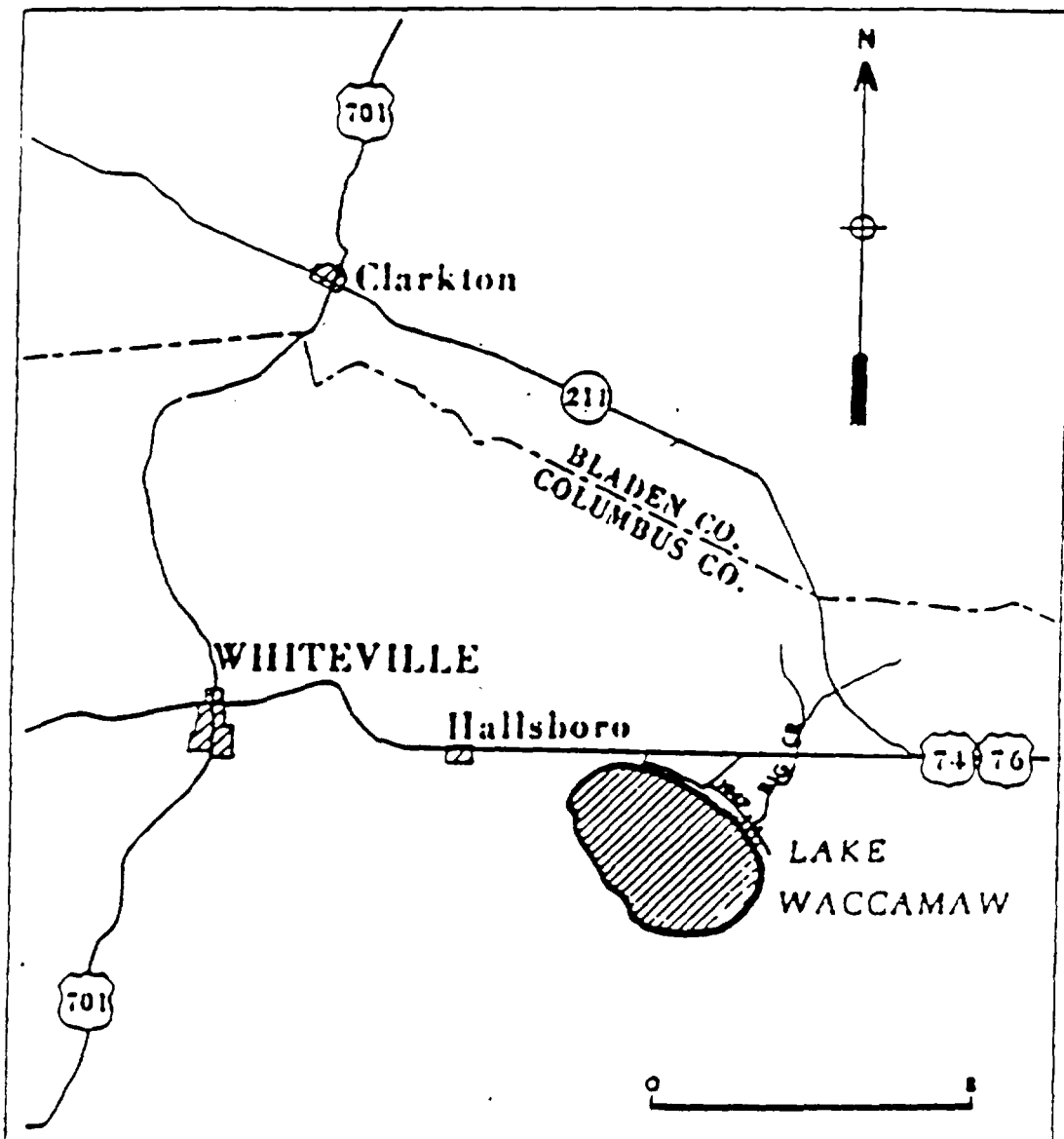


NORTH CAROLINA - Critical Habitat

Menidia extensa, "Waccamaw silverside"

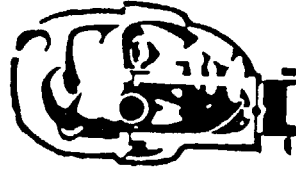
Columbus County. Lake Waccamaw in its entirety to mean high water level, and Big Creek from its mouth at Lake Waccamaw upstream approximately 0.6 kilometer (0.4 mile) to where the creek is crossed by County Road 1947.

Constituent elements include high quality clear open water, with a neutral pH and clean sand substrate.



REFERENCE 13

SYBRON ARDEN
(DAY INTERNATIONAL)
NCD 002221703



403NW

DIETZGEN

DIETZGEN

FIELD
BOOK

DIETZGEN CORPORATION

EVERYTHING FOR DRAFTING
SURVEYING & PRINTMAKING

Dau International
(Sydney Arden)

Dec. 17, 1991
9:55 am

Rubber products

Printing Industry

Lithographic printing,
ironing ink rolls
urethane product →
cutting most
rubber rollers

Textiles Industries

Aprons, coats,
rubber rollers

Rubber blanket used
to pre-shrink cloth.

Most items are small
on textile side

Printing - large rolls.

3 sections
- Urethane products

Rubber dust & products
goes to landfill
Municipal

Solvents goes to
Turnersville, NC.

Day International
used to be part of
DayCo. Split off in 1986

Municipal water
onsite. Asheville/
Buncombe water
system.

No onsite wells.

Envirochem removed
soils. Cleaned walls
and ceilings.

Get report from
Envirochem (Grover
will check on this
Bill said he can get
us a copy).

Last testing was early
1990's.

Toluene used in
printing. Have solvent
recovery system.
Recovers solvents
during curing
process (break rubber down
cement, spread on fabric. Toluene
extracted from the fabric.)
MEK used to clean
up rolls - textile side
scrub mold release from
rubber (cleaning).

1,1,1 TCA → used in
ink room.

solvents stored in
bulk.

Waste drummed onsite.

1,1,1 TCA & Heptane
recycles solvents. Sends
still bottoms offsite
(Handled by Ecoflow in Greensboro)

→ Resource / Recycle

Heptane used to
clean rubber
cement off in
printing side of
industry.

Large quantity
generator under
PCRA. Was sending
80 drums / month

off-site.

AIR PERMITS

3 gas-fired boilers permitted

1 solvent recovery system

8 dust collectors

4 gas-fired cure ovens for printing blankets.

2 UST \rightarrow 20,000 gallons fuel oil (#2) tanks were removed Summer 1991

Spatule removed tanks. No leakage.

Put in one above ground 20,000 gallon tank.

Toluene tank 20,000

Toluene Recovery 4,000

Heptane, MEK 4,000 gall.

Trichloroethane
purchased in 55-
gallon drums

Also purchases
methanol in drums.

1,100
~~1,000~~ components
used in mixing process

374 employees
3 shifts, 5 days

1,100 ft ditch
behind facility where
stormwater runoff is
directed. will be
released from one
outfall.

1964 - facility built
Taylor Instruments
moved in. Made
thermometers and
other medical
instruments.

Became Subron ~~Inc.~~ Inc.
~ ~~1973~~ 1974. Products
did not change.

1981 - Ritter Dental
operations brought
down from Rochester, N.Y.
They made dental
chairs and X-Ray
equipment. No
electroplating. Many
of the products were
made from stainless
steel.

1983 - Ritter operation
shut down. Then
Subron fell apart.
Medical products was
the main product.
Last operation to
move was thermometers.

Three operations:
1) Thermometers/Beometers
2) Dental
3) Medical

1987 Day Corporation
moved in. Production
of printing started in
1988.

Textiles started in Feb.
1989.

Sybron took care of
mercury spill out
front.

Day International
discovered mercury
between slab &
block during
demolition work in
the mercury fill
area.

RCRA Inspections
inspected 10 times
within 1st ten
years. Problems
w/ labels and
dating. Last two

inspections okay.
Keith Masters - old RCPA
Robin Purcell - new RCPA

Paperwork done for
NPDES permit, waiting
for rain occurrence. sent
samples into lab.

Process wastewater goes
to sanitary sewer
system (MSD Metropolitan
Sewer District of
Bluncombe County) Permit))

Stormwater ~~of~~ flows
to east to stream.
stream flows to
Lake Julie.

Day bought 30 of the
90 acres from
Sybilon Arden.

Building → 24,000 ft²

6+ acres developed.

Rest of site sold off
by separate parcels.

36" tile that drains
into creek

Separate parcels
sold is mostly
commercial.

(DRIVE ALONG RT 25)

Borings shown on
Charles T. Main
site plan dated
7/17/51. Try to
get info on borings.

Buried mercury and
covered it with
6" of cement.

soils & slabs disposed
of in roll away
container.

mercury disposed of in
clay soils.

After removal backfilled
w/ clean fill and
recapped with cement.

Onsite well was
filled.

PLANT TOUR

PRINTING

Dust Collector (talc
blanch) keeps blanket
from sticking) Photo 20

Solvent Recovery System
Photo 21.

Photo 22-24 - Drum Storage

20 drums of ~~50~~ haz
waste per quarter.

Drains from dvice
goes to tank farm.

Haz. Materials stored
in back of haz. waste
storage area.

Approx. 83 drums in
haz. waste area.

Stored on asphalt,
fenced completely.
Surrounded by
diking. No covering.

Drums appear to be
in good condition.
Sealed & intact.

Approx. 20 drums
of non hazardous
material.

Approx. 30 5-gallon
containers, good
condition. Sealed
→ TREMCO → roof repair
material

Wood behind drum
storage area

Stormwater ditch
starts by tank
farm (with virgin
solvents) and runs
behind facility).

Floor drains goes
to sawdust sewer

Kunhe blankets
coat rolls for
printing, Corrado
largest supplier.

Clus, Camara

- rubber blocks &
rubber blankets.

solvents stripped
from blankets and
goes to solvent
recovery system.

Rubber is lapped over
blanket where it
is adhered to. Then
~~goes to~~ blankets
are hung. Lets
solvents dissipate
to solvent recovery
system.

Colors dependent on
Blanket ply & thickness

After hanging, is
prepared for curing.
Paper applied in between
each layer. Goes
to gas fired ovens
for curing.

Blankets 150 yds ^{long} x 90" ^{wide}

Good Blanket =
500,000 impressions
on each blanket

After curing goes
to microprocessing
machine to count
defects. If there
are too many
defects, will cut
them out and
sell good part of
blanket.

If the whole roll
has defects, can
re-grind it and
send back to have
more layers of
rubber cement
added.

TEXTILES

Mix compounds
used to make
cotton or acrylics or to
coat bottles.

Rubber in one end
and extruding dye.

apron will run
against cot.

Thread is pulled
through tube.

Uarn goes through
between apron &
cot.

Chris' Camera

- dust collectors from
textile end.
- fuel tanks (#2 fuel oil)
- wet dust collector
- effluent discharge.

- ~~pipe~~ ^{pipe} Mercury fill room →
core sample locations

Mercury cleanup

16 drums Soil

10 drums washwater

several drums of slab.

Taylor Instruments
Used to purchase
10,000 lbs of mercury
per year.

Walt used to work for
Taylor Instruments
Rudy used to work for
Syblon

Walt said that from an
engineering standpoint,
they suggested storing
the waste mercury in a
vault. He said he does
not know who decided
to dump it out front
People Present

Rudy Gable
Walt Probst
Bill Mincey
Grover Nicholson
Helene Kasser
Christopher Huff

Attempted to reclaim
mercury but it got
to a point where it was
not economical.

For years, mercury was
treated like trash and
been thrown away in
the dumpsters and
ultimately hauled to
a landfill.

House keeping appears
to be good.
Saw employee
cleaning floors
with wet vacuum.

Asheville/Buncombe Co.
Water Department

~~Asheville~~ Asheville/Buncombe Co. Water Auth.
(704) 259-5956

City of Asheville Water Dept
(704) 258-0161

City Hall
710 Court Plaza

Nth
8th floor

Visited Water Department
Fax Callbox

Box Area that is
the more rural portions
of the county, people
rely on groundwater
wells for their
potable water.

N.C. Department of
Community Development

59 Woodfin Place

Well Data

Water Quality

251-6908

Parks & Rec.

251-6908

Apheville/Bryncmille Co.

Customer Service

259-5561

In takes located on

Northfork

Reservoir

Beetree

Reservoir

Hendersonville H₂O Dept.
697-3052

318 4th Ave.

25 South
Church Street
left onto 4th Ave
Cross over Main, King,
Grove streets. Bldg
on right.

Halo's
Hendersonville High School

Visited Groundwater
Section of Div of
Environmental Management

Ted Minnick

(704) 251-6208

Jannis Atkinson
Groundwater Section
Archdale Bldg
Raleigh

Helene R. Cassler

12/17/91

Consultation on Environmental and
FDA Medical Device Regulation

RUDOLPH C. GABEL, INC.
39 WENDOVER RD., ROCHESTER, NEW YORK 14610
TELEPHONE 716-288-7440

RUDOLPH C. GABEL

Certified Hazardous
Materials Manager



NORTH CAROLINA DEPARTMENT
OF ENVIRONMENT, HEALTH,
AND NATURAL RESOURCES

H. E. (TED) MINNICK
HYDROGEOLOGICAL TECHNICIAN
GROUNDWATER SECTION
DIVISION OF ENVIRONMENTAL MANAGEMENT

59 WOODFIN PLACE
ASHEVILLE, NC 28801

(704) 251-6208



BILL MINCEY
PLANT ENGINEERING
PRINTING AND TEXTILE PRODUCTS

ASHEVILLE FACILITY
P.O. BOX 1077
ARDEN, NC 28704
(704) 687-2485

OFFICE EXTENSION
(704) 687-4329
FAX: (704) 687-4322

REFERENCE 14

POPULATION WITHIN 4 MILES OF THE SYBRON ARDEN SITE

ARDEN, NORTH CAROLINA

POPULATION DENSITY, PEOPLE PER HOUSE

BUMCOMBE COUNTY: 2.40

HENDERSON COUNTY: 2.38

DISTANCE FROM SITE (MILES)	NUMBER OF HOMES		POPULATION		CUMULATIVE TOTAL
	BUNCOMBE COUNTY	HENDERSON COUNTY	BUNCOMBE COUNTY	HENDERSON COUNTY	
0 - 1/4	14	0	34	0	34
1/4 - 1/2	77	0	185	0	218
1/2 - 1	461	0	1,106	0	1,325
1 - 2	916	207	2,198	493	4,016
2 - 3	882	220	2,117	524	6,656
3 - 4	542	447	1,301	1,064	9,021
TOTAL:	2,892	874	6,941	2,080	9,021

Prepared by: Christopher Huff
Greenhorne & O'Mara
Raleigh, North Carolina

Date: 10-Mar-92

REFERENCE 15

Reserve Code

C26
3:16
C.2

N.C. DOCUMENTS

NOV 18 1987

N.C. STATE LIBRARY
Raleigh

GEOLOGY AND GROUND-WATER RESOURCES OF THE ASHEVILLE AREA NORTH CAROLINA

DIVISION OF GROUND WATER

GROUND WATER BULLETIN NO. 16

NORTH CAROLINA

DEPARTMENT OF WATER AND AIR RESOURCES

ENVIRONMENTAL MANAGEMENT
LIBRARY



N. C. DEPT. OF WATER AND AIR RESOURCES
RALEIGH, N. C.

RALEIGH
APRIL
1970

GEOLOGY AND GROUND-WATER RESOURCES
OF THE ASHEVILLE AREA
NORTH CAROLINA

By
HENRY TRAPP, JR.
GEOLOGIST, U. S. GEOLOGICAL SURVEY

GROUND WATER BULLETIN NUMBER 16

NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES
George E. Pickett, *Director*

Division of Ground Water
Harry M. Peek, *Chief*

PREPARED COOPERATIVELY BY THE GEOLOGICAL SURVEY
UNITED STATES DEPARTMENT OF THE INTERIOR
AND THE NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

APRIL 1970

STATE OF NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

DAN K. MOORE
GOVERNOR

P. D. DAVIS
H. GRADY FARTHING
WALTER M. FRANKLIN
J. NELSON GIBSON, JR.
J. M. JARRETT
P. GREER JOHNSON
WAYNE MABRY



J. VIVIAN WHITFIELD
CHAIRMAN
S. VERNON STEVENS, JR.
VICE-CHAIRMAN

J. AARON PREVOST
DR. ROBERT A. ROSS
W. GRADY STEVENS
GLENN M. TUCKER

GEORGE E. PICKETT, DIRECTOR
E. C. HUBBARD, ASST. DIRECTOR
P. O. BOX 9392
RALEIGH, N. C. 27603
TELEPHONE 828-3003

The Honorable Dan K. Moore
Governor of North Carolina
Raleigh, North Carolina

Dear Governor Moore:

I am pleased to submit Ground-Water Bulletin Number 16,
"Geology and Ground-Water Resources of the Asheville Area, North Caro-
lina" by Henry Trapp, Jr.

This report contains the results of an investigation made by
the U. S. Geological Survey in cooperation with the North Carolina
Department of Water Resources as a part of the series of reconnaissance
studies to provide a general evaluation of ground-water conditions in
all parts of the State. It presents the data collected and describes
the general geology and the occurrence, availability and quality of
ground water in Buncombe, Henderson, Madison, and Transylvania counties.

This report is a valuable contribution to the knowledge of the
geology and hydrology of the area, and will be available to all persons
and agencies concerned with development and management of ground-water
supplies.

Respectfully submitted,

A handwritten signature in cursive script, reading "George E. Pickett".
George E. Pickett

TABLE OF CONTENTS

	Page
Abstract.....	1
Introduction.....	3
Location and extent of the area.....	3
Purpose and scope.....	3
Cooperation and direction.....	3
Previous work.....	4
Acknowledgments.....	4
Geography.....	6
Area and population.....	6
Agriculture.....	6
Industry.....	6
Climate.....	7
Physiography and drainage.....	7
Geology.....	12
Principal rock units.....	12
Biotite gneiss.....	12
Biotite-injection gneiss.....	14
Garnet-muscovite schist.....	14
Hornblende gneiss.....	15
Unnamed granite intrusives.....	16
Whiteside granite.....	17
Granitic rock and granitic gneiss.....	18
Henderson Gneiss.....	18
Brevard Schist.....	19
Ultramafic rock.....	21
Sandstone, conglomerate, and quartzite.....	21
Shale, siltstone, slate, and argillite.....	21
Limestone, dolomite, and marble.....	25
Unconsolidated sediments.....	25
Well yield according to rock type.....	24
Structural geology.....	26
Hot Springs area.....	26
Pisgah anticline.....	28
Brevard Schist belt.....	28

TABLE OF CONTENTS

	Page
Hydrogen-ion concentration (pH).....	63
Specific conductance.....	63
Water quality related to source.....	64
Relationships of the chemical composition of ground	
water to lithology.....	67
Type I ground water.....	67
Type II ground water.....	69
Type III ground water.....	69
Type IV ground water.....	69
Type V ground water.....	70
Summary of quality of water section of the Asheville area report..	74
County descriptions.....	76
Buncombe County.....	76
Geography.....	76
Geology.....	78
Ground-water hydrology.....	79
Quality of ground water in Buncombe County.....	81
Henderson County.....	90
Geography.....	90
Geology.....	91
Ground-water hydrology.....	92
Quality of ground water in Henderson County.....	93
Madison County.....	103
Geography.....	103
Geology.....	103
Ground-water hydrology.....	105
Quality of ground water in Madison County.....	105
Transylvania County.....	115
Geography.....	115
Geology.....	116
Ground-water hydrology.....	117
Quality of ground water in Transylvania County.....	118
Selected bibliography.....	126

COUNTY DESCRIPTIONS

The Asheville area, comprising Madison, Buncombe, Henderson, and Transylvania Counties, covers 1,860 square miles within the Blue Ridge physiographic province of western North Carolina. Total population of the four counties in 1960 was 199,826.

The area is underlain mainly by gneisses and schists which are intruded by granites and ultramafic rocks. There are also lesser parts of the area underlain by clastic and carbonate rocks.

Springs are the most important source of water for the four-county area.

Excluding the waters which have excessive iron concentrations, nearly all ground water sampled in the Asheville area contains less than the recommended maximum concentrations of chemical constituents set by the U. S. Public Health Service. Water from a few wells has high nitrate and chloride concentrations which are indicative of possible pollution. In this report, a water is considered to have high chloride and nitrate if these constituents exceed 3 ppm and 1 ppm, respectively. Analyses of ground water from the Asheville area are shown in tables 16, 20, 24, and 28. The location of inventoried wells and springs in the Asheville area is shown in figure 14.

Buncombe County

(Area 645 square miles, population 130,074, 1960 census.)

Geography

Buncombe County is the largest and most populous county of the Asheville area. The county seat is Asheville, with a population of 60,192. Other incorporated towns are Barnardsville, Biltmore Forest, Black Mountain, Jupiter, Swannanoa, and Weaverville. The county is characterized by a dissected central plateau, known as the Asheville plateau, with mountains on the east and west sides. The plateau reaches its maximum width at Asheville, where its elevation is about 2,200 feet above sea level. The elevation ranges from about 1,720 feet on the French Broad River at the north edge of Buncombe County, and also on the Broad River at the southeast edge of the county, to 6,419 feet at Potato Knob. The county lies within the drainage basin of the French Broad River except for the projecting east corner

(Broad River Township) which is drained by the Broad River. The principal tributaries of the French Broad River in Buncombe County are Cane Creek, Hominy Creek, Swannanoa River, Newfound Creek, Reems Creek, and Sandymush Creek.

The county is served by the Southern Railway. Interstate highways and many State, County, and Forest Service roads and the Blue Ridge Parkway provide access to most parts of the county.

Although Buncombe is the most urbanized and industrialized county in the four-county area, agriculture is important. Only a small percentage of the working population is engaged primarily in agriculture, but a substantial number are part-time farmers. Burley tobacco is the principal cash crop. Livestock, poultry, and dairy farming are also important.

Manufacturing industries employing more than 50 persons include textiles, food processing, lumber, furniture, fabricated metal products, glass products, transportation equipment, leather products, and paper.

Geology

The central part of Buncombe County is underlain mainly by garnet-muscovite schist and biotite gneiss. To some extent, these alternate in discontinuous northeast-trending belts, together with elongate bodies of hornblende gneiss. There are irregular granitic bodies scattered throughout the area, and small pegmatite dikes and quartz veins intrude the schist and gneiss almost everywhere. They are so abundant locally that the rock can best be described as injection gneiss. At Wilson, just west of Swannanoa along Highway 70, is the largest dunite body in the four-county area. Except for the dunites and the larger hornblende gneiss bodies, the lithologic complex underlying the central part of the county is part of the Carolina Gneiss of Keith (1904). It is now believed to be mostly of metasedimentary origin, and the different metamorphic rock types largely reflect compositional differences in the original sediments.

The mountain ridges are mostly biotite gneiss with some granite. Some steep ridges are garnet-muscovite schist, but these usually have granitic cores.

Along the Madison County line, hornblende gneiss predominates, with some biotite gneiss and many granitic bodies. This is part of the

Roan Gneiss of Keith (1904). There are a few small ultramafic bodies, which contain talc, serpentine, asbestos, chromite, and dunite.

The southeastern part of the county is traversed by the Brevard Schist belt. This includes quartzite, phyllite, argillite, slate, garnet-muscovite schist, graphite schist, marble, fine-grained gneiss, and pyroclastics. Its most distinctive rock type is sericite schist containing finely disseminated graphite. It is difficult to separate the Brevard Schist from the garnet-muscovite schist bordering it on the northwest in this county.

Southeast of the Brevard belt is the Henderson Gneiss. This is characterized by feldspar porphyroblasts which are locally broken and deformed into augen. The rock varies in composition from a granite gneiss to a biotite gneiss or quartzite with a few scattered feldspar porphyroblasts. Although it is largely confined to the southeast side of the Brevard Schist belt, there are a few areas of Henderson-type rock northwest of the Brevard Schist belt on the south flank of the Swannanoa Mountains. In Buncombe County, the Henderson Gneiss forms rugged topography.

Regional dip is about 40 degrees to the southeast, but is reversed near Mt. Pisgah. The Pisgah Ridge is the northwest flank of an anticline which plunges northeast. The nose of this anticline can be traced south of Candler.

A pronounced topographic alignment extends northeastward across western North Carolina. It follows the northwestern boundary of the Brevard Schist from Buncombe County, but diverges from the belt to a more easterly direction northeast of Buncombe County. This alignment may represent a major fault which follows the Brevard Schist for part of its course because of the incompetent nature of the schist.

Ground-Water Hydrology

Most rural and some suburban homes in Buncombe County depend on ground water for domestic supplies. Springs are used where available, particularly in the hillier parts of the county. Dug wells have been used for many years, but are being superseded in importance by drilled wells.

Agricultural use of ground water in Buncombe County is mostly restricted to watering livestock, washing dairy equipment, and small-scale irrigation, such as tobacco seed beds and nursery plants. Surface water is also used for agricultural purposes. The potential supply of ground water in the county exceeds present demands for agricultural purposes.

All the factories in the county have public water supplies available to them, except for an apparel plant at Barnardsville, which uses spring water from the Barnardsville School supply. (Spring No. 101). A furniture plant in Asheville uses water from a well (Well No. 135) for the plant process.

The Grove Park Inn in Asheville (Well No. 42) uses well water to fill a swimming pool and for air conditioning. The possibility of greater use of ground water in air conditioning and in heat pumps should be considered. Except in shallow dug wells, the temperature of ground water in this area usually does not exceed 60°F in the summer nor drop below 50°F in the winter.

Most of the springs used for domestic purposes have yields on the order of 1 gpm. One spring (Spring No. 15A) west of Asheville yields slightly mineralized water with an odor of hydrogen sulfide.

Inventoried drilled wells in Buncombe County have an average depth of 147 feet (the greatest in the four-county area) and an average yield of 10.3 gpm or 0.069 gpm per foot (the lowest in the four-county area).

Turbidity occurs in water from some wells, particularly those drilled in deeply weathered garnet-muscovite schist. Brevard Schist, and hornblende gneiss.

Public water supplies serve a greater proportion of Buncombe County than any of the other three counties. The Asheville water system is the largest in the county and also supplements the Black Mountain, Weaverville, and Woodfin municipal water systems. Surface water is the source of almost all water for public supplies. Two small public systems are supplied by springs. Although the county is traversed by municipal water lines, many areas are not served by them and depend on individual ground-water supplies.

Quality of Ground Water in Buncombe County

Analyses of ground water from Buncombe County is shown in table 14. Iron exceeds 0.3 ppm in water from wells 4, 22, 29, 32, 34, 41, 49, 55, 57. The water from well 4 has an iron concentration of 12 ppm. This well is located in hornblende gneiss, and solution of ferromagnesian minerals accounts for the extremely high iron concentration. The next highest iron concentration (2.8 ppm) occurs in water from well 41.

Water from wells 7, 15, 23, 29, 31, 33, and 66 contains high concentrations of chloride and/or nitrate.

REFERENCE 16

Established Series

Rev. RM:CD:AG

11/90

TATE SERIES

The Tate series consists of very deep, well drained, moderately permeable soils on benches, fans, and toe slopes in coves in the Southern Appalachian Mountains. They formed in alluvium and colluvium derived from materials weathered from felsic to mafic crystalline rocks such as granite, mica gneiss, hornblende gneiss, and schist. Mean annual temperature is 52 degrees F., and mean annual precipitation about 52 inches near the type location. Slope ranges from 2 to 50 percent.

TAXONOMIC CLASS: Fine-loamy, mixed, mesic Typic Hapludults

TYPICAL PEDON: Tate loam, in pasture. (Colors are for moist soil unless otherwise stated.)

Ap--0 to 7 inches; dark grayish brown (10YR 4/2) loam; moderate fine granular structure; very friable; many fine roots; few fine pores; few root channels; contains some material from the BA horizon; moderately acid; abrupt smooth boundary. (5 to 11 inches thick)

BA--7 to 12 inches; brown (10YR 4/3) clay loam; weak medium subangular blocky structure; friable; common fine roots; common fine pores; common root channels; moderately acid; clear smooth boundary. (0 to 14 inches thick)

Bt--12 to 32 inches; yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; few faint clay films on faces of peds and in pores; few fine flakes of mica; strongly acid; clear smooth boundary. (15 to 40 inches thick)

BC--32 to 46 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; many pebbles; common fine flakes of mica; strongly acid; gradual wavy boundary. (3 to 20 inches thick)

C--46 to 72 inches; brownish yellow (10YR 6/8) and light yellowish brown (10YR 6/4) fine sandy loam; massive; friable; common quartz pebbles in upper part; strongly acid.

TYPE LOCATION: Alleghany County, North Carolina; 2 1/2 miles west of Roaring Gap, 1 mile west of Highway 18, in pasture 50 yards west of field road.

RANGE IN CHARACTERISTICS: Thickness of the solum ranges from 24 to more than 60 inches. Depth to bedrock is greater than 5 feet. Content of rock fragments ranges from 0 to 35 percent in the A horizon, 0 to 35 percent in the Bt horizon, and 5 to 60 percent in the BC and C horizons. Rock fragments are dominantly gravel, cobble, or stones in the A horizon, gravel in the Bt horizon, and gravel or cobbles in the BC and C horizons. The soil is very strongly acid to slightly acid unless limed. Flakes of mica range from none to common throughout.

The A or Ap horizon has hue of 10YR, value of 3 to 6, and chroma of 2

through 4. Where the value is 3, it is less than 2 inches thick. The horizon is loam, sandy loam, or fine sandy loam in the fine earth fraction.

The E horizon, where present, has hue of 10YR, value of 4 or 6, and chroma of 3 to 6. Texture is similar to the A horizon.

The BA or BE horizon, where present, has hue of 7.5YR or 10YR, value of 4 or 6, and chroma of 3 to 6. It is loam, sandy loam, fine sandy loam, sandy clay loam, or clay loam in the fine earth fraction.

The Bt horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8. It is clay loam, sandy clay loam, or loam in the fine earth fraction. The upper 20 inches of the argillic horizon contain less than 30 percent silt. In some pedons there are a few mottles with chroma of 2 or less at depths of more than 24 inches below the top of the argillic horizon.

The BC horizon, where present, is similar in color to the Bt horizon and is fine sandy loam, loam, clay loam, sandy loam, or sandy clay loam in the fine earth fraction. It commonly contains moderate amounts of weathered feldspar and pebbles and cobbles of quartz and granite.

The C horizon, where present, is colluvial material that is loamy or sandy in the fine-earth fraction and is variable in color. Sandy textures are restricted to depths below 40 inches.

COMPETING SERIES: These are Albemarle, Allegheny, Allenwood, Arcola, Arendtsville, Aura, Bedington, Birdsboro, Brasstown, Bucks, Butano, Chester, Chetwynd, Chilmark, Clymer, Collington, Cowee, Edgemont, Edneytown, Elsinboro, Eubanks, Frankstown, Freehold, Gilpin, Glenelg, Junaluska, Leck Kill, Matapeake, Meadowville, Murrill, Nixon, Pineville, Quakertown, Rayne, Shelocta, Shouns, Syenite, Thurmont, Ungers, and Whiteford series. Albemarle, Allegheny, Bedington, Bucks, Clymer, Frankstown, Gilpin, Manassas, Leck Kill, Murrill, Nixon, Quakertown, Rayne, Shelocta, and Ungers soils are dominantly derived from sandstone, siltstone, or shale. Allenwood, Arendtsville, Aura, Birdsboro, Eubanks, Fairfax, Glenelg, Shouns, Thurmont, and Whiteford soils have hue of 5YR or redder in some part of the B horizon. Brasstown, Butano, Cowee, Gilpin and Junaluska soils have bedrock at depths less than 60 inches. Chester soils are dominantly underlain by micaceous saprolite. Chetwynd soils formed in loess. Chilmark and Meadowville soils have a lithologic discontinuity within the B horizon. Collington and Freehold soils contain glauconite. Edgemont soils have coarse fragments dominated by quartzite. Edneyville soils are underlain by saprolite. Elsinboro soils are stratified in the lower part of the control section.

GEOGRAPHIC SETTING: Tate soils are on alluvial fans, foot slopes, and benches in coves in the Southern Appalachian Mountains. Slopes are commonly 5 to 15 percent but range from 2 to 50 percent. Elevation ranges from 1400 to 4000 feet. The soil formed in alluvium and colluvium derived from materials weathered from felsic to mafic crystalline rocks such as granite, mica gneiss, hornblende gneiss, and schist. Mean annual temperature is 52 degrees F., and mean annual precipitation about 52 inches near the type location.

GEOGRAPHICALLY ASSOCIATED SOILS: In addition to the competing Edneytown series, these are Ashe, Brevard, Chandler, Chestnut, Cowee, Edneyville,

Evard, Fanning, Greenlee, Tusquitee, and Watauga series.

Asher, Chandler, Chastanot, Covey, Eberlyville, Eberlytown, Evard, Fanning, and Watauga soils are on ridges and steep slopes, formed in red sandstone, and have O horizons of saprolite. Evard, Greenlee, and Tusquitee soils are formed in colluvial material on fans, benches, and foot slopes in cover. Eberly soils have a redder Bt horizon, Chandler soils are in a loamy-skeletal family, and Tusquitee soils are in a coarse-loamy family. In addition, Greenlee and Tusquitee soils have a cambic horizon.

DRAINAGE AND PERMEABILITY: Well drained; slow runoff where forest litter has not been disturbed or had only partial disturbance; medium to rapid runoff in cleared areas; moderate permeability.

USE AND VEGETATION: About half is cleared and used for growing corn, small grain, tobacco, truck crops, and pasture. Common trees in forested areas are scarlet oak, white oak, yellow-poplar, eastern white pine, shortleaf pine, Virginia pine, and northern red oak. Understory plants include mountain-laurel, rhododendron, blueberry, Greenbrier, flowering dogwood, black locust, honeysuckle, sourwood, and flame azalea.

DISTRIBUTION AND EXTENT: The Southern Appalachian Mountains of North Carolina, Georgia, Virginia, eastern Tennessee, and possibly South Carolina. The series has large extent.

SERIES ESTABLISHED: Transylvania County, North Carolina; 1940.

REMARKS: Diagnostic horizons and features recognized in this pedon are

Ochric epipedon: 0 to 7 inches (Ap horizon)

Argillic horizon: 7 to 46 inches (EA, Bt, and BC horizons).

SIR's = NC0025, NC0258 (GRAVELLY)

MLRA = 130

National Cooperative Soil Survey
U.S.A.

MLR(0): 130

REV. RAG. 1-91

TYPIC KANNAPLUDULTS, CLAYEY, KAOLINITIC, MESIC

THE HAYESVILLE SERIES CONSISTS OF WELL DRAINED SOILS ON GENTLY SLOPING TO VERY STEEP RIDGES AND SIDE SLOPES IN INTERMOUNTAIN PLATEAUS AND VALLEY. THEY FORMED IN MATERIAL WEATHERED FROM FELSIC CRYSTALLINE ROCKS SUCH AS GRANITE, MICA GNEISS, AND GRANODIORITE. TYPICALLY, THEY HAVE A BROWN LOAM SURFACE LAYER 5 INCHES THICK. THE SUBSOIL IS RED CLAY AND CLAY LOAM, AND YELLOWISH RED SANDY CLAY TO A DEPTH OF 48 INCHES. THE SUBSTRATUM IS FINE SANDY LOAM SAPROLITE TO A DEPTH OF 60 INCHES. SLOPES RANGE FROM 2 TO 50 PERCENT.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
				W	2-60

ESTIMATED SOIL PROPERTIES (A)

DEPTH (IN)	USDA TEXTURE	UNIFIED	AASHTO	IFRACT. >10 IN	IFRACT. >3 IN	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	CLAY (PCT)
				(PCT)	(PCT)	4 10 40 200	(PCT)
0-5	1CL, SCL	1CL, SC, ML	1A-4, A-6, A-7		0-5	190-100 85-100 80-95 45-65	120-40
0-5	1GR-L, GR-FSL, GR-SL	1SM, SC, CL, ML	1A-2, A-4		0-5	170-90 60-75 40-70 25-60	16-25
0-5	1L, FSL, VFSL	1SM, SC, ML, CL	1A-4		0-5	190-100 85-95 70-95 35-60	110-25
15-38	1CL, C	1ML, MH, CL, CH	1A-6, A-7		0-5	190-100 85-100 70-100 55-80	130-50
138-48	1SCL, CL, L	1SM, ML, MH, CL	1A-6, A-7		0-5	190-100 90-100 85-95 45-65	120-40
148-60	1FSL, L, SCL	1SM, ML, CL, SC	1A-4, A-6		5-15	190-100 90-95 65-90 40-55	15-25

DEPTH (IN)	LIQUID LIMIT (%)	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM ³)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CAC03 (PCT)	GYP SUM (PCT)
0-5	30-50	17-18	1.30-1.50	0.6-2.0	0.12-0.20	3.6-6.5	-	-	-	-	-
0-5	25-35	10-10	1.35-1.60	2.0-6.0	0.10-0.18	3.6-6.5	-	-	-	-	-
0-5	25-35	10-10	1.35-1.60	2.0-6.0	0.12-0.20	3.6-6.5	-	-	-	-	-
15-38	36-66	11-35	1.20-1.35	0.6-2.0	0.15-0.20	3.6-6.0	-	-	-	-	-
138-48	36-55	11-25	1.30-1.40	0.6-2.0	0.12-0.20	3.6-6.0	-	-	-	-	-
148-60	25-40	10-12	1.45-1.65	2.0-6.0	0.11-0.15	3.6-6.0	-	-	-	-	-

DEPTH (IN)	ORGANIC MATTER	SHRINK-SWELL FACTORS	EROSION INDEX	WIND EROD.	CORROSIVITY
---------------	----------------	----------------------	---------------	------------	-------------

(PCT) (POTENTIAL) K T (GROUP) INDEX STEEL CONCRETE

0-5 1-3 LOW 1.24 5 5 56 MODERATE MODERATE

0-5 1-3 LOW 1.20 5 5 56
0-5 1-3 LOW 1.20 5 5 56

15-38 <1 LOW 1.24
138-48 <.5 LOW 1.20
148-60 <.5 LOW 1.17

FLOODING			HIGH WATER TABLE			CEMENTED PAV		BEDROCK		SUBSIDENCE		HYDIPOTENTIAL	
			DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP	FROST
FREQUENCY	DURATION	MONTHS	(FT)			(IN)		(IN)		(IN)	(IN)		ACTION
NONE			>6.0			-		>60		-		B	MODERATE

CONSTRUCTION MATERIAL (B)

SEPTIC TANK	2-8Z: MODERATE-PERCS SLOWLY		2-15Z: GOOD
ABSORPTION FIELDS	8-15Z: MODERATE-PERCS SLOWLY,SLOPE	ROADFILL	15-25Z: FAIR-SLOPE
	15+Z: SEVERE-SLOPE		25+Z: POOR-SLOPE
SEWAGE LAGOON AREAS	2-7Z: SEVERE-SEEPAGE	SAND	IMPROBABLE-EXCESS FINES
	7-Z: SEVERE-SEEPAGE, SLOPE		
SANITARY LANDFILL (TRENCH)	2-15Z: SEVERE-SEEPAGE	GRAVEL	IMPROBABLE-EXCESS FINES
	15+Z: SEVERE-SEEPAGE, SLOPE		
SANITARY LANDFILL (AREA)	2-8Z: SLIGHT	TOPSOIL	2-15Z: POOR-TOO CLAYEY
	8-15Z: MODERATE-SLOPE		15+Z: POOR-TOO CLAYEY, SLOPE
	15+Z: SEVERE-SLOPE		
DAILY COVER FOR LANDFILL	2-8Z: FAIR-TOO CLAYEY, HARD TO PACK		WATER MANAGEMENT (B)
	8-15Z: FAIR-TOO CLAYEY, HARD TO PACK, SLOPE	POND RESERVOIR AREA	2-8Z: SEVERE-SEEPAGE
	15+Z: POOR-SLOPE		8+Z: SEVERE-SEEPAGE, SLOPE
BUILDING SITE DEVELOPMENT (B)			
SHALLOW EXCAVATIONS	2-8Z: MODERATE-TOO CLAYEY	EEMBANKMENTS	SEVERE-HARD TO PACK
	8-15Z: MODERATE-TOO CLAYEY, SLOPE	DIKES AND LEVEES	
	15+Z: SEVERE-SLOPE		
DWELLINGS WITHOUT BASEMENTS	2-8Z: SLIGHT	EXCAVATED PONDS	SEVERE-NO WATER
	8-15Z: MODERATE-SLOPE	AQUIFER FED	
	15+Z: SEVERE-SLOPE		
DWELLINGS WITH BASEMENTS	2-8Z: SLIGHT	DRAINAGE	DEEP TO WATER
	8-15Z: MODERATE-SLOPE		
	15+Z: SEVERE-SLOPE		
SMALL COMMERCIAL BUILDINGS	2-4Z: SLIGHT	IRRIGATION	2-3Z: FAVORABLE
	4-8Z: MODERATE-SLOPE		3+Z: SLOPE
	8+Z: SEVERE-SLOPE		
LOCAL ROADS AND STREETS	2-8Z: MODERATE-LOW STRENGTH, FROST ACTION	TERRACES AND DIVERSIONS	2-8Z: FAVORABLE
	8-15Z: MODERATE-LOW STRENGTH, SLOPE, FROST ACTION		8+Z: SLOPE
	15+Z: SEVERE-SLOPE		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	2-8Z L,FSL,VFSL,CL,SCL: SLIGHT	GRASSED WATERWAYS	2-8Z: FAVORABLE
	8-15Z L,FSL,VFSL,CL,SCL: MODERATE-SLOPE		8+Z: SLOPE
	15+Z: SEVERE-SLOPE		
	2-8Z GR: MODERATE-SMALL STONES		
	8-15Z GR: MODERATE-SMALL STONES, SLOPE		

RECREATIONAL DEVELOPMENT (B)

CAMP AREAS	2-8% L,FSL,VFSL,CL,SCL: SLIGHT	2-6% L,FSL,VFSL,CL,SCL: MODERATE-SLOPE, SMALL STONES
	8-15% L,FSL,VFSL,CL,SCL: MODERATE-SLOPE	
	15-2% SEVERE-SLOPE	6-7 L,FSL,VFSL,CL,SCL: SEVERE-SLOPE
	2-8% GR: MODERATE-SMALL STONES	2-6% GR: SEVERE-SMALL STONES
	8-15% GR: MODERATE-SLOPE, SMALL STONES	6-7 GR: SEVERE-SLOPE, SMALL STONES
PICNIC AREAS	2-8% L,FSL,VFSL,CL,SCL: SLIGHT	2-15%: SLIGHT
	8-15% L,FSL,VFSL,CL,SCL: MODERATE-SLOPE	15-25%: MODERATE-SLOPE
	15-2% SEVERE-SLOPE	AND 25-2%: SEVERE-SLOPE
	2-8% GR: MODERATE-SMALL STONES	
	8-15% GR: MODERATE-SLOPE, SMALL STONES	

REGIONAL INTERPRETATIONS

CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CLASS- DETERMINING PHASE	CAPA- BILITY	CORN (BU)	TOBACCO (LBS)	WHEAT (BU)	OATS (BU)	ALFALFA HAY (TONS)	GRASS- LEGUME HAY (TONS)	COOL SEASON GRASS (AUM)
	INIRRIIR	INIRRIIR	INIRRIIR	INIRRIIR	INIRRIIR	INIRRIIR	INIRRIIR	INIRRIIR
12-6% L,FSL,VFSL,GR	2E	100	12400	60	70	4.0	3.6	6.5
16-10% L,FSL,VFSL,GR	3E	90	12200	50	60	3.8	3.4	6.5
110-15% L,FSL,VFSL,GR	4E	80	12100	45	50	3.2	3.0	6.0
115-25% L,FSL,VFSL,GR	6E	-	-	-	-	-	-	5.0
12-10% ERODED,CL,SCL	4E	75	11800	45	50	3.2	3.0	5.0
110-15% ERODED,CL,SCL	6E	-	-	-	-	2.6	2.2	4.0
115-25% ERODED,CL,SCL	7E	-	-	-	-	-	-	3.0
125-2%	7E	-	-	-	-	-	-	-

WOODLAND SUITABILITY (C)

CLASS- DETERMINING PHASE	JORD	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY		
	SYN	HAZARD	HAZARD	HAZARD	HAZARD	COMMON TREES	ISITEIPROD	TREES TO PLANT
		HAZARD	HAZARD	HAZARD	HAZARD		INDEX	CLAS
12-15% L,FSL,VFSL,GR	7A	SLIGHT	SLIGHT	SLIGHT	SLIGHT	MODER. YELLOW POPLAR	193	7
115-35% L,FSL,VFSL,GR	7R	MODER.	MODER.	SLIGHT	SLIGHT	MODER. EASTERN WHITE PINE	185	111
135-2% L,FSL,VFSL,GR	7R	SEVERE	SEVERE	SLIGHT	SLIGHT	MODER. NORTHERN RED OAK	1	1
						PITCH PINE	182	8
						SHORTLEAF PINE	170	8
						VIRGINIA PINE	174	8
12-15% ERODED,CL,SCL	6C	SLIGHT	MODER.	MODER.	SLIGHT	MODER. YELLOW POPLAR	185	6
115-35% ERODED,CL,SCL	6R	MODER.	MODER.	MODER.	SLIGHT	MODER. EASTERN WHITE PINE	177	110
135-2% ERODED,CL,SCL	6R	SEVERE	SEVERE	MODER.	SLIGHT	MODER. NORTHERN RED OAK	1-	1-
						PITCH PINE	178	8
						SHORTLEAF PINE	168	7
						VIRGINIA PINE	170	8
						NORTHERN RED OAK		

WINDBREAKS

CLASS-DETERMINING PHASE	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT
	MCNE							

WILDLIFE HABITAT SUITABILITY (D)

CLASS-	POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:			
DETERMINING PHASE	GRAIN & GRASS SEED	LEGUME	WILD HERB.	HARDWOOD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPEN WILDLF	WOODLAND WILDLF
12-6%	GOOD	GOOD	GOOD	GOOD	GOOD	-	IV. POOR	IV. POOR	GOOD	GOOD
16-15%	FAIR	GOOD	GOOD	GOOD	GOOD	-	IV. POOR	IV. POOR	GOOD	GOOD
115-25%	POOR	FAIR	GOOD	GOOD	GOOD	-	IV. POOR	IV. POOR	FAIR	GOOD
125-7%	IV. POOR	POOR	GOOD	GOOD	GOOD	-	IV. POOR	IV. POOR	POOR	GOOD

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT	PERCENTAGE COMPOSITION (DRY WEIGHT) BY CLASS DETERMINING PHASE			
	SYMBOL (NLSPN)				
FLOWERING DOGWOOD	COFL2				
RHODODENDRON	RHOD0				
MOUNTAIN LAUREL	KALA				
SOURWOOD	OXAR				
POTENTIAL PRODUCTION (LBS./AC. DRY WT):					
FAVORABLE YEARS					
NORMAL YEARS					
UNFAVORABLE YEARS					

FOOTNOTES

A ESTIMATES OF ENGINEERING PROPERTIES BASED ON TEST DATA OF 2 PEDONS: YADKIN COUNTY, NC AND DAWSON CO. GA.

B RATINGS BASED ON NSH, 7-83.

C WOODLAND RATINGS BASED ON NATIONAL FORESTRY MANUAL, 9/80.

D WILDLIFE RATINGS BASED ON SOILS MEMORANDUM-74, JAN. 1972.

* CHRISTMAS TREE SPECIES.

SITE INDEX IS A SUMMARY OF LESS THAN 8 MEASUREMENTS ON THIS SOIL.

** CHRISTMAS TREE SPECIES

REFERENCE 17

POPULATION USING GROUNDWATER WITHIN 4 MILES OF THE SYBRON ARDEN SITE ARDEN, NORTH CAROLINA

POPULATION DENSITY, PEOPLE PER HOUSE

BUMCOMBE COUNTY: 2.40

HENDERSON COUNTY: 2.38

DISTANCE FROM SITE (MILES)	NUMBER OF HOMES		POPULATION		CUMULATIVE TOTAL
	BUNCOMBE COUNTY	HENDERSON COUNTY	BUNCOMBE COUNTY	HENDERSON COUNTY	
0 - 1/4	2	0	5	0	5
1/4 - 1/2	5	0	12	0	17
1/2 - 1	6	0	14	0	31
1 - 2	32	36	77	86	194
2 - 3	378	10	907	24	1,125
3 - 4	190	344	456	819	2,399
TOTAL:	613	390	1,471	928	2,399

Prepared by: Christopher Huff
Greenborne & O'Mara
Raleigh, North Carolina

Date: 10-Mar-92

REFERENCE 18

17 DEC 91

SYBRON - ARDEN

ARRIVED 0915

RUDY GABEL, CONSULTANT

WORKED WITH SYBRON AS ENVIRONMENTAL
MANAGER 1965-1986, 1979 → ENVIRONMET

WALT PROBST -

BILL MINLEY - PLANT ENGR.

Helene Kasser } G:O G. Nicholson
Chris Hoff } G:O

DAY INTERNATIONAL - RUBBER

RUBBER PRINTING ROLLS

URETHANE CUTTING GUIDES

TEXTILE RUBBER PRODUCTS

RUBBER COVERED ROLLERS.

WASTE STREAM - RUBBER DUST - BUNCOMBE CO. LANDFILL

RUBBER WASTE

SOLVENTS IN RUBBER WASTE

INDUSTRIAL WASTE LANDFILL IN KERNERSVILLE

MERCURY CLEAN-UP INSIDE BY ENVIROCHEM.

REPORT: MERCURY DECONTAMINATION PROJECT

DAY INTERNATIONAL, ARDEN NC

JANUARY 1987

17 DEC 91

55-gal drums

WASTE STREAMS -
 1, 1, 1 - trichloroethylene - ink thinner
 clean mold release from product
 MEK - textile rubber solvent
 70% T, 60% rubber
 toluene - printing - rubber cement, blankets
 4000 gal
 Heptane - clean-up off printing shift -
 cleaning off rubber cement.
 Waste is distilled by mobile unit.

Resource Recycling, Columbia SC

Still bottoms - handled by Ecoflo.

Resin: 3 51 fired barrels

Silent Recovery System
 2-8 Dust Collectors

4 gas fired cure ovens

Underground tanks - 2 20,000 gallon fuel oil tanks
 removed by SPATCO summer 1991

374 employees - 3 shifts - 5 days/week.

Work on 1st shift.

HISTORY: 1964 New building on owned land

Taylor Instruments - Medical Instruments

1974 Became Sybron Corp - same product
 Sybron Corp. added change
 1981 Klier Dental Div - dental chair operation

1983 End of 1st shift. Still made rubber milk.

1982 End of Thermomaster Operation

1987 Day began - Rubber products

1983-1987
 Phase out of Day
 1987-1988

City water -

M&D - Metro. Sewerage District (Buncombe Co.).

M&D Permit - to discharge to sewer.

Drainage to stormwater -

Just filled for Stormwater Discharge Permit

Drainage from site went east - to creek.

Underground pipe 36"

30.2 acres. to DAY

Originally 90 acres of Sybron

Building 240 000 sq ft. + 4 acres parking lot.

No known disposals on 90 acre tract other than Hg

Water quantity: 14 drums - ~ 98 cubic feet

6' x 6' x 3 1/2' hole with cover

Poured in broken glass thermometer

1971

Scrap glass & Hg -

1 - Some went for Hg recovery

2 - Some went to land fill

Thermometer Corporation of America - Arden.

REFERENCE 19

TELEPHONE MEMORANDUM

G&O Personnel: Christopher Huff

Date: 01-14-92

Conversation With: Nick Clemmons

Agency: North Carolina Wildlife Resources Commission in Western
North Carolina.

Talked to Nick Clemmons from the State of North Carolina Wildlife Resources Division, about recreational activities along the French Broad river. He stated that the typical activities like bank fishing, canoeing, kayaking and swimming. He also stated that near Hot Springs there is some white water rafting. When asked about the type of fish in the river, Nick stated that there are over fifty different species of fish in the river. Then he gave information on a new book recently published book titled: Fish of North Carolina by Edward Meenhinick from the University of North Carolina Charlotte, for \$39.00. As for endangered and threatened species around the Asheville/Buncombe County area, he had no information on that subject, but gave a number in Raleigh for the Wildlife Resources Commission, Endangered Species Branch at 733-7291.

REFERENCE 20

The French Broad River

This river is the county's largest body of water. Its headwaters start just outside the town of Rosman: from there the river meanders through the county's flat lands, continuing on to Henderson and Buncombe counties and beyond.

Our section of river is ideally suited for fishing as well as boat* and canoe trips. There are no sections of whitewater and the river is unclassified in Transylvania County as a canoeing river.

The most easily accessible stretch of river for "wading" begins at the headwaters and continues on and off to Island Ford Road Bridge (see map). This section of river is predominantly Trout waters although other species, Bluegill and Rock Bass, can also be caught.

From the Island Ford Road Bridge to the Hap Simpson Park area (both of these are excellent access points for boats* and canoes) one may catch Trout, Bluegill, some Smallmouth Bass, some Largemouth Bass, Catfish and Musky. Beyond Hap Simpson all the way to the Blantyre area, these same species prevail.

The bridges which cross the river for the most part, give the angler "bank" fishing access*. Starting from the west end, you'll find bridges at Hwy. 215, at Hannah Ford Road, Island Ford Road, Barclay Road. In the Pisgah Forest community area the bridge at Crab Creek also crosses the river.

The most commonly used types of tackle are spinning, spin casting and fly, all in the ultra light to medium weight categories. The addition of bait casting equipment comes into play when seeking Musky. Here tackle should be capable of handling up to 20 lb. test line.

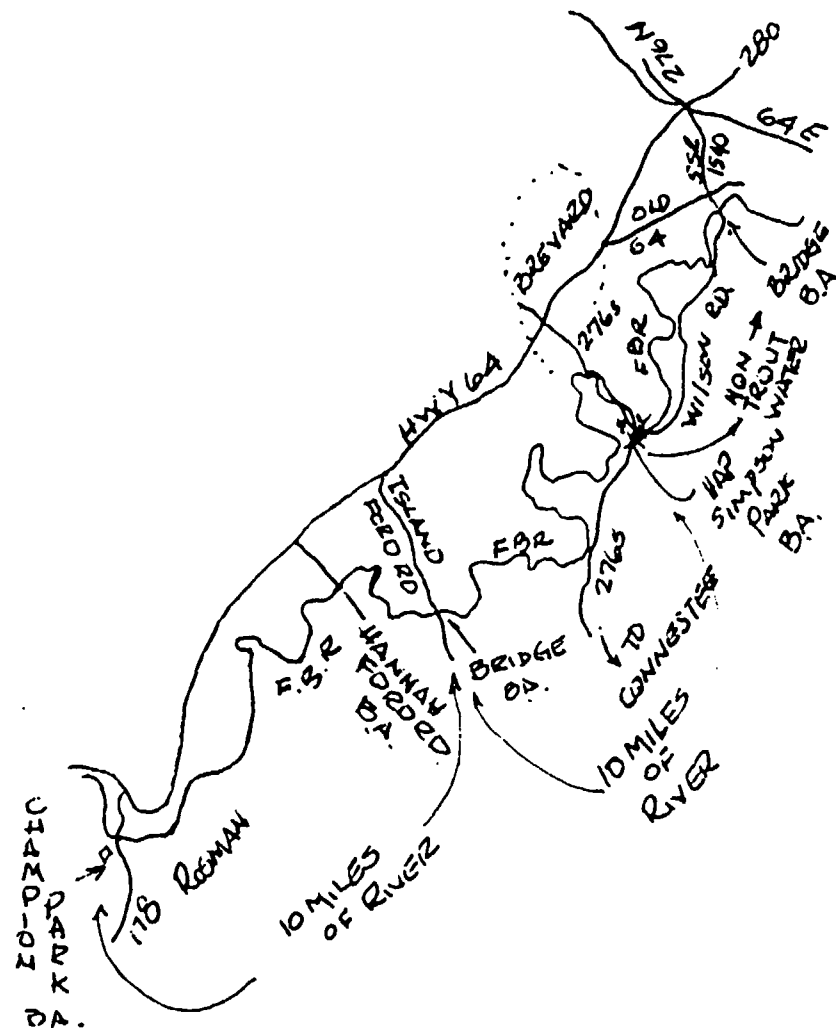
The river has a special fascination for most anglers; one never really knows what may hit a lure or bait cast upon its waters.

Note: The bridge at Wilson Road beyond Hap Simpson Park separates general trout waters from non-trout waters. Fishing is year 'round from this bridge on. If a Trout is caught in the off season you are required to let it go.

*Boat: Jon boats, lightweight, easy to carry. No power needed as trips are for the most part down river only!

*Access: Sometimes means walking down a steep bank covered with undergrowth with just a barely visible footpath or it may mean several yards to a body of water or a 1/2 mile "hike".

The French Broad River



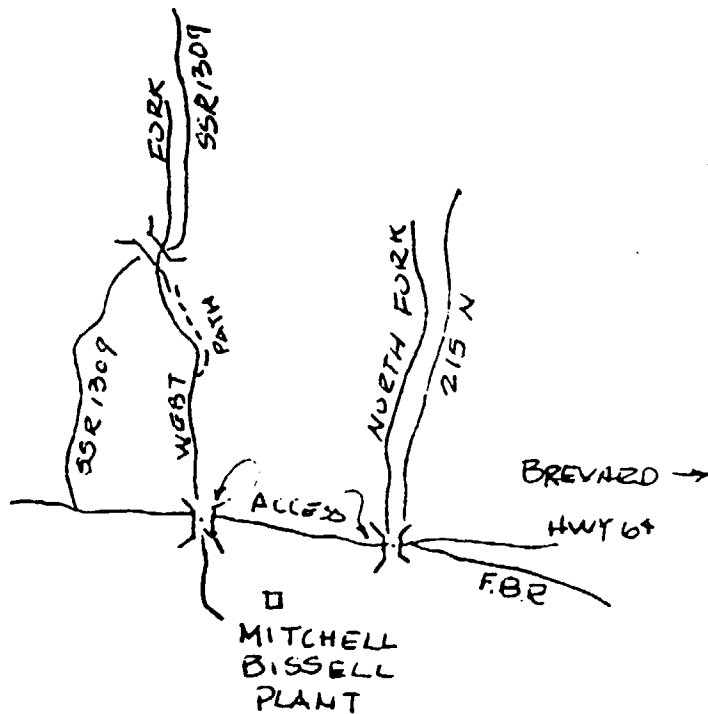
LEGEND: BA, BOAT ACCESS
FBR FRENCH BROAD RIVER

The West Fork is one of the main tributaries of the French Broad River. It is readily accessible at several places and having a moderate current* offers good wading opportunities to catch Rainbows and Golden Trout (Golden Trout at upper end near Cantrell bridge). Close to the headwaters of the French Broad River, Browns and Rainbows are caught.

You'll find access to the West Fork at the intersection of Hwy. 64W and 215N. It's the fork that somewhat parallels 64 beyond that point. Further up 64 just beyond the Mitchell-Bissell plant, the West Fork crosses under Hwy. 64. You can fish both above and below the bridge. Parking is at the roadside so be careful around the highway. Continuing on 64W, you'll come to S.R. 1309. Taking this road will lead to the "Cantrell" bridge. There is parking at the roadside and a small footpath follows the creek, below the bridge, to a scenic fall and pool.

For the most part the West Fork can be fished by anglers using spinning and spin-casting tackle and fly fishing equipment.

West Fork of the French Broad



*After seasonal rains this creek, like others, may swell rapidly making fishing difficult and sometimes dangerous as well.

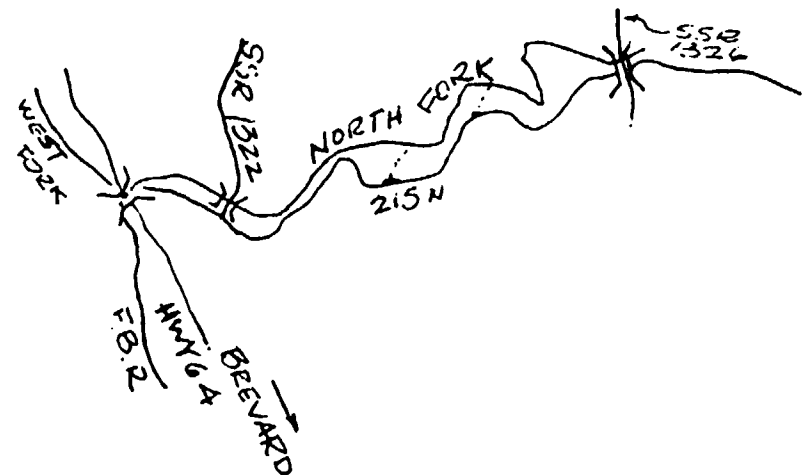
This Fork is another major tributary of the French Broad River and is somewhat larger than the West Fork. Like the West Fork, the North Fork is accessible at the intersection of Hwy. 64W and 215 North. Further upstream the river runs in a gorge far below and out of sight of Hwy. 215. As the map shows there are footpaths down to the river usually adjacent to the vehicle parking areas* at the road's edge. When using the footpaths make sure to mark them where they meet the river so as to find the path when backtracking. You can fish upstream from one path to another once you get familiar with the various trails running down from the road. In the latter instance, 2 vehicles are usually necessary: Fishing up to one and driving back down to the other (fishing with a partner is highly advisable in this section of the North Fork).

In the North Fork, look to catch both Browns and Rainbows. Plan to wade this river.

The North Fork like the West Fork offers the anglers several options in fishing tackle again. It can be fished with spinning, spin-casting or fly fishing equipment.

Beyond the bridge on SSR 1326 this stream is "Posted", please respect other people's property.

North Fork of the French Broad



*Parking Area: Not formed parking spots but roadsides widened to accommodate 1 or 2 vehicles, usually gravel covered.

Note: Fishing the "Gorge" can take up to a full day, so go prepared with food and drink. It is a "wild" remote area and first aid equipment is a good idea, too. It can be a strenuous day's fishing if you are not in shape, so take it a little at a time!

The East Fork (of the French Broad River)

Just outside the town of Rosman, the East Fork meets up with the French Broad River. It is for a large portion of its run paralleled and crossed by the East Fork Road, thereby giving anglers many points of access.

Taking Hwy. 178 South (Pickens Hwy.) outside of Rosman proceed to East Fork Road. Go left at this intersection. Also look for the sign East Fork Baptist Church, then refer to map.

The East Fork plays host to both Rainbows and Browns.

Wading the East Fork is an excellent way to fish it. Current* is not usually severe.

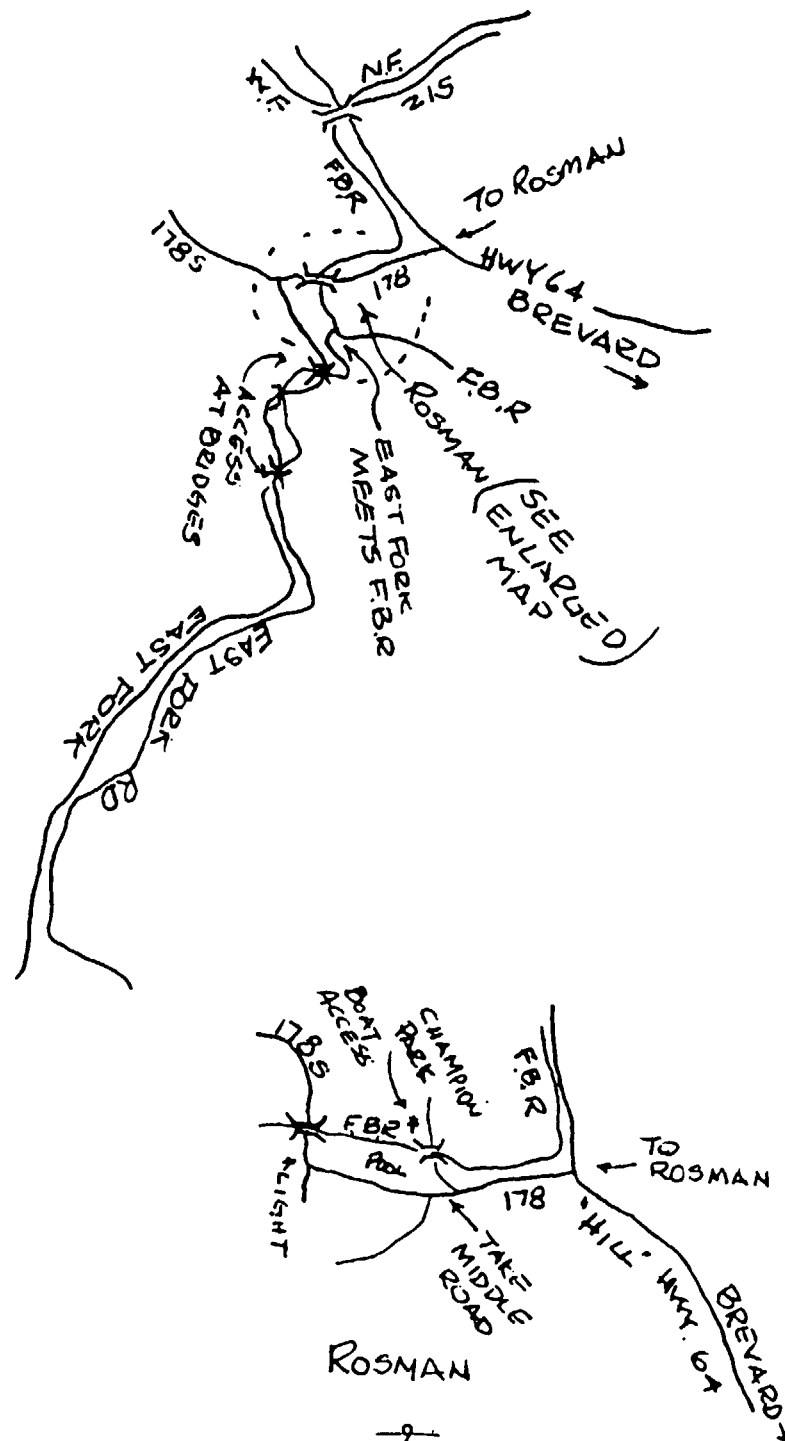
The East Fork offers a variety of stream characteristics the Trout fisherman can try. Along its length you'll find deep quiet pools, riffles, shoals, and flats.

The East Fork is regularly fished using spin-casting, spinning and fly fishing tackle.



*After seasonal rains this creek, like others, may swell rapidly making fishing difficult and sometimes dangerous as well.

East Fork of the French Broad River



NORTH CAROLINA WILDLIFE RESOURCES COMMISSION
Division of Boating and Inland Fisheries
DISTRICT 9 - FISHING OPPORTUNITIES

BY SPECIES:

- MUSKELLUNGE** Excellent fishing is found in the French Broad River in Buncombe, Henderson, and Transylvania counties. Good fishing also is available below Redmon Dam in Madison County, and on Lake Adger in Poke County. Muskie fingerlings are stocked in French Broad River and Lake Adger. Best period to fish is from March to May.
- SMALLMOUTH BASS** Excellent populations are found in Bear Lake, Chatuge Lake, the Little Tennessee River and the French Broad River in Madison and Buncombe counties. Other good areas include Fontana Lake, Glenville Lake, and Santeetlah Lake.
- LARGEMOUTH BASS** Excellent populations are in Lake Adger. Good fishing is available in Fontana and Santeetlah in April and early May. Lake Julian and Lake Summit offer fair fishing throughout the year.
- WALLEYE** Excellent fishing occurs in the Little Tennessee and Tuckasegee arms of Fontana Lake from mid-March through April. Santeetlah, Glenville, and Hiwassee lakes also offer good fishing during this time of year.
- WHITE BASS** Excellent fishing is found in the Little Tennessee and Tuckasegee arms of Fontana Lake during spring and fall.
- RAINBOW TROUT** Many opportunities exist for rainbow trout fishing in Western North Carolina. Most designated trout streams contain rainbow trout. Good fishing can be found in Fires Creek, Hiwassee River, and Nantahala River. Fair spawning runs exist on the Nantahala River above Nantahala Lake (especially tributaries including Park Creek, Kimsey Creek, Buck Creek, and Brysons Branch), Santeetlah and Snowbird Creeks (tributaries of Santeetlah Lake) and tributaries to Fontana Lake including Panther Creek, Alarka Creek, Hazel Creek, Forney Creek, and Chambers Creek. Fishing for lake populations of rainbow trout (often referred to as steelhead trout) occurs at night during the summer months around the dams at depths of 40-50 feet.
- BROWN TROUT** Good fishing can be found in the Davidson River, Cullasaja River, and the tributaries to the Nantahala River above Nantahala Lake, especially from October through January. Other good areas include The South Mills River and Tanasee Creek.
- BROOK TROUT** Good fishing occurs in the headwaters of most streams on U.S. Forest Service lands. Excellent opportunities exist in Panthertown Creek, Greenland Creek, and Flat Creek and tributaries to the Nantahala River near Standing Indian Campground in the Nantahala National Forest. Other good areas include Tanasee Creek, Winesprings Creek and Slick Rock Creek.
- CATFISH** Good fishing is found for channel and flathead catfish in the French Broad River in Buncombe and Madison counties. Fontana Lake also offers good fishing for these species.

BY LOCATIONS

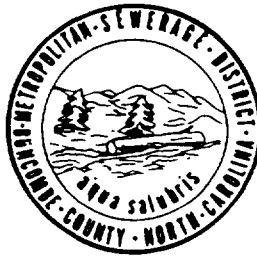
- MURPHY** Muskie, largemouth bass, walleye, and smallmouth bass fishing are available in Hiwassee reservoir. Appalachia Lake offers good trout fishing especially for brown trout. Chatuge Lake, near Hayesville, offers good smallmouth bass fishing. The NC Wildlife Resources Commission maintains boating access areas on both lakes. Trout fishing is available in the Valley River, Hiwassee River, and Slick Rock Creek.
- FRANKLIN** Smallmouth bass fishing is available in the Little Tennessee River. Rainbow, brown, and brook trout fishing are available in the Nantahala River above Nantahala Lake. Largemouth bass, smallmouth bass, and walleye fishing are good in Nantahala Lake.
- BRYSON CITY** Excellent fishing for largemouth bass, smallmouth bass, white bass and walleye occurs in the Tuckaseegee and Little Tennessee River arms of Fontana Lake. Also good trout fishing is found in the Nantahala River.
- SYLVA** Fontana Lake offers good fishing for largemouth bass, smallmouth bass, white bass, and walleye. Muskie are also taken occasionally. Good fishing for smallmouth and largemouth bass is found in Glenville and Bear lakes. Excellent wild brook trout fishing, managed under a catch-and-release regulation, exists on the headwaters of the Tuckaseegee River including Panthertown, Greenland and Flat creeks.
- WAYNESVILLE** Trout fishing is available in Jonathans Creek, Left Prong of the Pigeon River, and Cold Springs Creek. Good smallmouth fishing is available in the Pigeon River below Waterville Dam.
- ASHEVILLE** Muskie, and smallmouth bass fishing are good in the French Broad River. Stocked trout fishing is available in Swannanoa River and lake Powhatan. Lake Jullian offers fair largemouth bass fishing. *Note: outboard motors are not allowed on this lake.*
- MARSHALL** Good muskie, catfish, and smallmouth bass fishing are available in the French Broad River. Trout fishing is available in Mineral Creek and the Big Ivy Creek.
- HENDERSONVILLE-BREVARD** Muskie fishing is available in the French Broad River. Excellent rainbow and brown trout fishing occurs in the Davidson River, and South Mills River.
- ROBBINSVILLE** Walleye, smallmouth bass, largemouth bass, and rainbow trout fishing are available in Santeetlah Lake. Snowbird and Santeetlah creeks offer good fishing for both stocked and wild rainbow, brook and brown trout.
- TRYON-POLK COUNTY** Good largemouth bass and muskie fishing are available in Lake Adger. Good trout fishing is available in the Green River.

REFERENCE 21

MSD Metropolitan Sewerage District of Buncombe County, North Carolina.

W. H. Mull, P.E., Engineer-Manager
P. O. Box 8969, Asheville, N. C. 28814
Telephone: Area Code 704-254-9646

John S. Stevens, General Counsel



January 30, 1991

Mr. James Mann, Plant Manager
Day International
Post Office Box 1077
Arden, North Carolina 28704

Subject: Permit to Discharge Industrial
Waste No. S-057-91

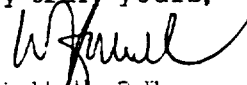
Dear Mr. Mann:

Pursuant to your Application for Permit to Discharge Industrial Waste dated October 24, 1990, and the inspection of your facilities by the MSD, we are enclosing herewith your new Permit to Discharge Industrial Waste. Please note that the effective date of this Permit will be February 28, 1991. If you have any comments concerning this Permit, please advise in writing no later than thirty (30) days following receipt of this letter.

The conditions and requirements included in the Permit, the Permit Application, and the enclosed Sewer Use Ordinance of the Metropolitan Sewerage District of Buncombe County are integral parts of this Permit.

This Permit is valid until February 28, 1994. If there is a significant change in your wastewater discharge as defined in Section 4.05 and 4.06 of the MSD Sewer Use Ordinance; or your facilities are reassigned, transferred, or sold to a new User, or moved to different premises, a new Permit Application must be submitted to MSD at least ninety (90) days prior to any of the above events.

Very truly yours,


W. H. Mull, P.E.
Engineer-Manager

WHM/rm
enc (2)

cc: Ms. Dana Rees Folley (NCDEH & NR), w/enc
Mr. Bill Hincey

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NORTH CAROLINA

PERMIT TO DISCHARGE INDUSTRIAL WASTE
FOR
SIGNIFICANT INDUSTRIAL USER

Permit No. S-057-91

In accordance with all terms and conditions of the Sewer Use Ordinance (SUO) of the District Board of the Metropolitan Sewerage District of Buncombe County, North Carolina (MSD), NPDES Permit No. NC0024911 for the operation of the Metropolitan Wastewater Treatment Plant by MSD, North Carolina General Statute 143-215.1, and other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission and the District Board of the Metropolitan Sewerage District of Buncombe County, North Carolina:

Permission Is Hereby Granted To:

Day International
Post Office Box 1077
Arden, North Carolina 28704

FOR THE

construction and operation of industrial wastewater pretreatment facilities as specified in this Permit and the discharge of wastewater from sanitary facilities and process facilities classified by Standard Industrial Classification (SIC) Code No(s). 3069 & 3089 into the District Sewerage System or the Metropolitan Sewerage System at 95 Glenn Bridge Road, Arden, North Carolina 28813. The discharge shall be in accordance with effluent limitations, monitoring requirements and other conditions set forth in this Permit to Discharge Industrial Waste (the "Permit").

Effective this 28th day of February, 1991.

This Permit expires the 28th day of February, 1994.

METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NORTH CAROLINA


W. H. MULL, P. E.
ENGINEER-MANAGER

PART I

OPERATION AND CONSTRUCTION OF FACILITIES
FOR THE PRETREATMENT OF INDUSTRIAL WASTEWATER

- A. Continued operation of the industrial wastewater pretreatment facilities described below is hereby approved subject to the conditions and requirements contained in the Permit and the MSD Sewer Use Ordinance.

Chemical precipitation
Filtration
pH control
Solvent separation
Solvent recovery system
MEK distillation
Spill protection

- B. Construction and operation of the additional industrial wastewater pretreatment facilities set forth below is hereby approved:

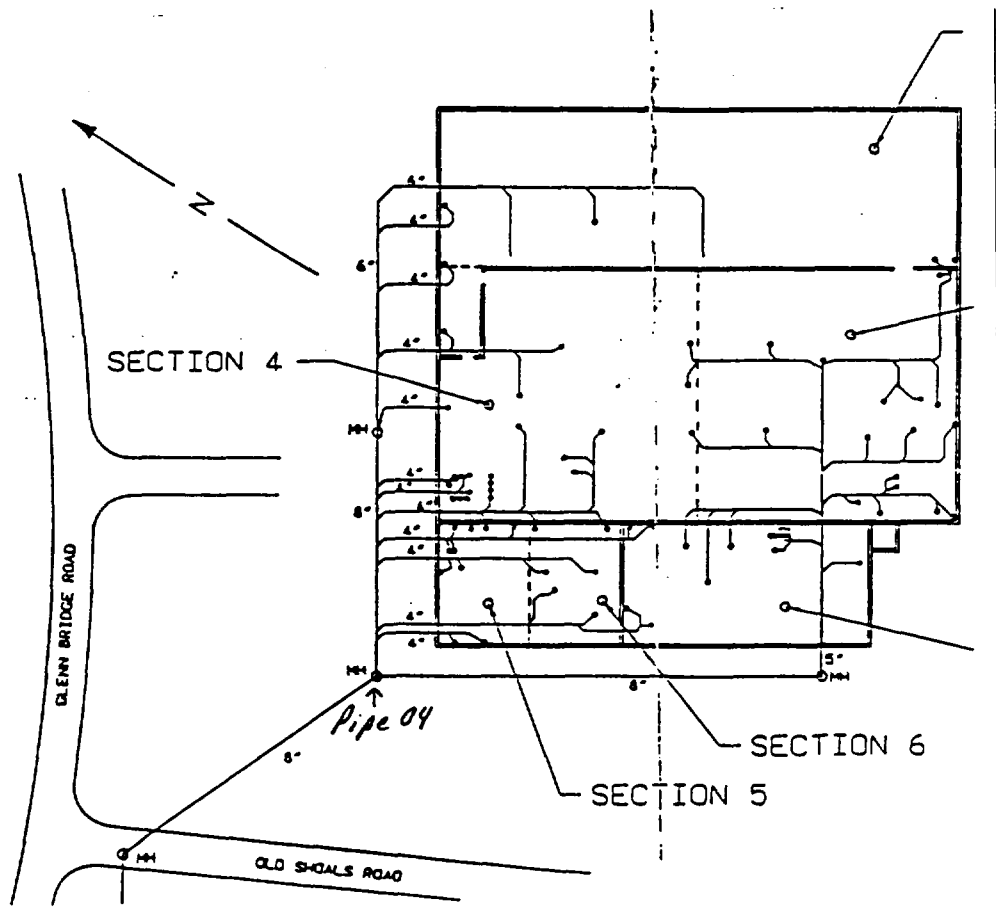
Not applicable

PART II

EFFLUENT LIMITS AND MONITORING REQUIREMENTS

A. Description of Discharge(s)

<u>Pipe No.</u>	<u>Description</u>
04	Rubber processing, blanket manufacturing; Porous leach tank Textile contract cooling, sanitary sewage



PART II

EFFLUENT LIMITS AND MONITORING REQUIREMENTS

B. Effluent Limitations

Effective immediately and lasting until the expiration of the Permit, the Industrial User is authorized to discharge process waste from Pipe No. 04. The discharge shall be limited and monitored as specified below:

EFFLUENT LIMITATIONS, MG/L

<u>Limited Parameter</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Sample Type</u>	<u>Monitoring Frequency Min.</u>	
				<u>MSD</u>	<u>Industrial User</u>
Flow, MGD(1)	0.120	0.110	Continuous	4/6 months	Daily
BOD	750	500	Composite	4/6 months	--
TSS	750	500	Composite	4/6 months	--
pH(2)			Grab(4)	4/6 months	Daily
Zinc	1.00	1.00	Composite	4/6 months	2/months
Toluene	1.00	1.00	Grab*	--	1/3 months
MEK	1.00	1.00	Grab*	--	1/3 months

*Samples must be collected in a special volatile organic vile that does not allow any air into the sample "head room."

Priority organics known or suspected present in User's manufacturing processes are strictly prohibited.

PART II

EFFLUENT LIMITS AND MONITORING REQUIREMENTS

The scheduled monitoring frequencies are minimum requirements and may be adjusted by MSD.

- (1) Flow is in million gallons per day (MGD).
- (2) The pH shall be not less than 6.0 or greater than 10.0 standard units. Deviations from these limits shall be handled in accordance with MSD Pretreatment Program Guidance Policy.
- (3) Discharge of Parameters not specifically limited in this Part is limited to Domestic Sewage Levels as established by the District.
- (4) Where continuous pH recording equipment is utilized, the lowest and highest reading shall be taken from a 24 hour chart.
- (5) Continuous and composite samples shall be at least eight (8) portions collected during a twenty-four (24) hour period or the total period of Waste flow if less than twenty-four (24) hours. Alternate sampling requirements may be established in a User's Permit to Discharge Industrial Waste or by the Engineer-Manager.
- (6) A "grab" sample, for monitoring requirements, is defined as a single "dip" and "take" sample collected at a representative point in the discharge stream.
- (7) An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

C. Monitoring and Reporting

(1) Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken from Pipe numbers specified in the Permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Pipe numbers shall not be changed without notification to, and approval by MSD.

Samples must be collected and composited (a minimum of eight portions) over an entire operating day. Where weekly samples are required, a progressive schedule will be used, Monday one week, Tuesday the next, etc.

PART II

EFFLUENT LIMITS AND MONITORING REQUIREMENTS

Test procedures for the analysis of pollutants shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto unless specified otherwise in the monitoring conditions of the Permit.

All records of analyses and measurements performed by the Industrial User must be retained by the Industrial User for three (3) years.

(2) Reporting

- a. Monitoring results obtained by the Industrial User shall be reported on Indirect Discharge Monitoring Report (IDMR) and Self-Monitoring Monthly Report Forms, postmarked no later than the twentieth day of the month following the month in which the samples were taken. If no discharge occurs during the reporting period, "no discharge" shall be indicated on the Forms. Copies of these and contract laboratory reports shall be submitted to the MSD at the following address:

Attention: Chief Industrial Monitoring
Metropolitan Sewerage District
P. O. Box 8969
Asheville, North Carolina 28814

- b. In the event of an accidental discharge or slug loading or self-monitoring indicating non-compliance with the SUO or the Permit, the Industrial User shall immediately notify MSD by telephone of the accidental discharge, slug loading, or self-monitoring indicating non-compliance. The telephone numbers to contact are:

8:30 a.m. to 4:30 p.m., Chief, Industrial Monitoring, (704) 254-9646.
4:30 p.m. to 8:30 a.m., Chief Operator on Duty, (704) 252-7342.

- c. Within five (5) days of the accidental discharge, slug loading or other non-compliant discharge, a written report by the authorized representative of the Industrial User shall be submitted to the Engineer-Manager of the MSD. The report must include as a minimum:

- (i) The date, time and duration of the accidental discharge, slug loading or discharge not in compliance with conditions and requirements of the SUO or the Permit;
- (ii) The quantity and waste characteristics of the discharge;

PART II

EFFLUENT LIMITS AND MONITORING REQUIREMENTS

- (iii) The corrective action taken to prevent future accidental discharges, slug loadings or discharges not in compliance with the SUO or the Permit.
 - d. If self-monitoring by an Industrial User indicates a violation, the Industrial User shall repeat the self-monitoring and analysis and submit the results of the repeat analysis to MSD within thirty (30) days after becoming aware of the violation. The requirements of this paragraph are in addition to the requirements set forth in subparagraphs (b) and (c) of this Part.
- (3) Organic Compound Certification
- a. The following organic compounds certification is required for each Periodic Report due July 12 and January 12:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the organic compounds, I certify that to the best of my knowledge and belief, no dumping of concentrated organics into the MSD Sewerage System has occurred since filing of the last Periodic Report. I further certify that this facility is implementing the Solvent Management Plan submitted to MSD."

PART III

GENERAL CONDITIONS AND REQUIREMENTS

A. Duty to Comply

The Industrial User must comply with all conditions of the Permit. Any non-compliance with the Permit constitutes a violation of the SUO and may be grounds for possible enforcement action. The MSD may levy fines of up to \$1,000 for a violation of the SUO. The Industrial User may be subject to criminal penalties levied by the State of North Carolina or the United States of America.

B. Duty to Mitigate - Prevention of Adverse Impact

The Industrial User shall take all reasonable steps to minimize or prevent any discharge in violation of the Permit which has a reasonable likelihood of adversely affecting human health, the MSD Treatment Plant, the French Broad River, or the environment.

C. General Prohibitive Standards

In addition to the requirements of the Permit, the Industrial User shall comply with the general prohibitive discharge standards in 40 CFR 403.5(a) and (b) of the Federal pretreatment regulations.

D. Facilities Operation

The Industrial User shall at all times maintain in good working order and operate as efficiently as possible, all control facilities or systems installed or used by the Industrial User to achieve compliance with the terms and conditions of the Permit and the SUO.

E. Bypass

Bypass of treatment facilities is prohibited. MSD may take enforcement action against the Industrial User for bypass unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
- (2) there were no feasible alternatives to the bypass; and
- (3) the Industrial User submits prior notice of the bypass to MSD if the Industrial User knows in advance of the need for bypass.

PART III

GENERAL CONDITIONS AND REQUIREMENTS

The Conditions of (2) are not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment down time or preventative maintenance. If the Industrial user does not know of the bypass in advance, it must submit verbal notice to MSD as soon as the Industrial User becomes aware of the bypass. The verbal notice shall be followed with a written submission. The written submission shall describe the bypass and its cause; state how long the bypass occurred including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass.

F. Flow Measurement

Flow measuring and recording facilities shall be certified as to accuracy by the manufacturer and annually thereafter. These certifications shall be provided by the Industrial User to the MSD by July 12 each year.

G. Malfunction of Flow Monitoring Equipment

Any malfunction of flow monitoring and recording equipment shall be reported by the Industrial User immediately to MSD by phone followed by a written report submitted to the Engineer-Manager to MSD within five (5) days of the malfunction. Any malfunction must be corrected within seven (7) days. Certification of accuracy must be provided to MSD within fifteen (15) days of the date of repair.

H. Notification of Production Changes

A minimum of ninety (90) days written notice to MSD is required for:

- (1) A projected increase in wastewater volume or strength above the present operation.
- (2) Introduction of new wastes or changes in manufacturing processes or pretreatment facilities altering waste characteristics from the present operations.
- (3) Proposed discharge of any constituents not specifically permitted in Part II of the Permit.

PART III

GENERAL CONDITIONS AND REQUIREMENTS

I. Right to Discharge

Discharge of wastewater with changes as indicated in H above shall not begin until a Permit to Discharge Industrial Waste has been issued by MSD for the proposed discharge or until MSD amends an existing Permit.

J. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from such materials from entering the sewer system. The Industrial User is responsible for assuring its compliance with any requirements regarding the generation, treatment, storage, or disposal of "Hazardous Waste" as defined under the Federal Resource Conservation and Recovery Act.

K. Upset Conditions

An "Upset" of Pretreatment Facilities means an exceptional incident in which there is an unintentional and temporary noncompliance with the effluent limitations of the Permit because of factors beyond the reasonable control of the Industrial User. An Upset does not include noncompliance to the extent caused by operational error, improperly designed or inadequate treatment facilities, lack of preventative maintenance, or careless or improper operations.

An Upset may constitute an affirmative defense for action brought for the noncompliance. The Industrial User has the burden of proof to provide evidence and demonstrate that none of the factors listed in the preceding paragraph were responsible for the noncompliance.

L. Toxic Pollutants

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Clean Water Act or North Carolina General Statutes 143-215.1 for a Toxic Pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in the Permit, the Permit may be revised or modified in accordance with the toxic effluent standard or prohibition.

PART III

GENERAL CONDITIONS AND REQUIREMENTS

M. Accidental Discharges and Slug Loads

The Industrial User shall provide protection from accidental discharges of prohibited materials or other substances regulated by the Permit. The Industrial User shall develop, obtain MSD approval, and implement a written spill control and countermeasure plan within 120 days of the effective date of the Permit. The plan may include, but is not limited to, the construction of containment dikes around the pretreatment unit, all process units containing water or oil, and the chemical storage area; the rerouting of all floor drains in the manufacturing area to a holding area prior to connection to the pretreatment unit; and the plugging of all floor drains in the chemical storage area.

N. Notice in Event of Accidental Discharge

A Notice shall be permanently posted at a prominent place in the facility for which the Permit has been issued advising employees whom to call in the event of an Accidental Discharge. Users shall insure that all employees who observe or who may cause or suffer such an Accidental Discharge to occur are advised of the emergency notification procedure. The notification procedure outlined in Part II, 2, b, c, d, pages 6 & 7 of this Permit shall be followed.

O. Need to Halt or Reduce not a Defense

It shall not be a defense for an Industrial User in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of the Permit.

P. Dilution

The Industrial User shall not increase the use of potable or process water or in any other way attempt to dilute the discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the Permit.

Q. Right of Entry

The Industrial User shall allow the staff of the Metropolitan Sewerage District, the Approval Authority, the Environmental Protection Agency and/or their authorized representatives, upon the presentation of credentials:

PART III

GENERAL CONDITIONS AND REQUIREMENTS

- (1) To enter upon the Industrial User's premises where a real or potential discharge is located or in which records are required to be kept under the terms and conditions of the Permit; and
- (2) At reasonable times to have access to and copy records required to be kept under the terms and conditions of the Permit; to inspect any monitoring equipment or monitoring method required in the Permit; and to sample any discharge of pollutants.

R. Monitoring Access

MSD, the Approval Authority and EPA shall have the right to set up on the Industrial User's Property such devices as are necessary to conduct sampling, inspection, compliance monitoring and flow metering operations.

S. Availability of Records and Reports

The Industrial User shall retain records of all monitoring information, including all calibration and maintenance records as well as copies of reports and information used to complete the application for the Permit for at least three (3) years. All records pertaining to any enforcement action shall be retained and preserved by the Industrial User until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

Except for data determined to be confidential under the Sewer Use Ordinance, all reports prepared in accordance with terms of the Permit shall be available for public inspection at the Metropolitan Sewerage District. Effluent data shall not be considered confidential.

T. Duty to Provide Information

The Industrial User shall furnish to the Engineer-Manger or his designees, within a reasonable time, any information MSD, or its designee, or the North Carolina Department of Environment, Health and Natural Resources may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the Permit or to determine compliance with the Permit. The Industrial User shall also furnish, upon request, copies of records required to be kept by the Permit.

PART III

GENERAL CONDITIONS AND REQUIREMENTS

U. Penalties for Falsification of Reports

The Metropolitan Sewerage District SUO provides that any person who knowingly makes any false statements or representation in any application or report or other document submitted or required to be maintained pursuant to the SUO or the Permit, or who knowingly renders inaccurate any monitoring device or method required under this ordinance, shall upon conviction be punished by a fine of not more than \$1,000 for each violation. NCGS 143-215.6 provides that similar offenses may be punished by a fine of up to \$10,000 per violation, or by imprisonment for not more than six months or both.

V. Signatory Requirements

All reports or information submitted pursuant to the requirements of the Permit must be signed and certified by the Authorized Representative of the Industrial User.

W. Civil and Criminal Liability

Nothing in the Permit shall be construed to relieve the Industrial User from civil or criminal penalties for noncompliance with provisions of the Permit.

X. Federal and State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal and State law or regulation.

Y. Property Rights

The Permit does not convey any property rights in either real or personal property, or any executive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

Z. Severability

The provisions of the Permit are severable and, if any provision of the Permit or the application of any provision of the Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of the Permit shall not be affected thereby.

PART III

GENERAL CONDITIONS AND REQUIREMENTS

AA. Reopener Provision

The Permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 302(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

- (1) contains different conditions or is otherwise more stringent than any effluent limitation in the Permit; or
- (2) controls any pollutant not limited in the Permit.

The Permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

BB. Permit Modification, Revocation, Termination

The Permit may be modified, revoked and reissued or terminated in accordance with the requirements of the SUO, North Carolina General Statute 143-215.1 and regulations promulgated thereunder.

The Permit shall be modified, alternatively or revoked and reissued, to comply with any applicable effluent standard or limitation for the control of any pollutant shown to contribute to the toxicity of the MSD Wastewater Treatment Plant effluent or any pollutant that is otherwise limited by the MSD Discharge Permit. The Permit as modified or reissued under this paragraph may also contain any other requirements of State or Federal pretreatment regulations then applicable.

CC. Application for Permit Renewal

The Industrial User is responsible for filing application for reissuance of the Permit within ninety (90) days of its expiration date.

DD. Transferability

The Permit shall not be reassigned or transferred or sold to a new owner, new Industrial User, different premises or a new or changed operation without the written approval of MSD. Any succeeding owner or Industrial User shall also agree in writing to comply with the terms and conditions of the Permit and shall be provided a copy of the Permit.

PART IV

COMPLIANCE SCHEDULE

(1) Schedule of Compliance

<u>Deadline for Compliance</u>	<u>Activity</u>
--------------------------------	-----------------

Consent Order pending - current Zinc violations	
---	--

- (2) No later than 14 calendar days following any date identified in the above schedule of compliance, the permittee shall submit a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the case of latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20272 Premise No. 00774 Registration No.

Permit for Boilers Location 95 Gleen Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Kewanee Type gas-oil Model

Rated Capacity 19,700 Btu/hr. Owners Identification No. 1

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20272

1. This unit are subject to Section 1-138., Control of Particulate from Fuel Burning Source, of the Rules and Regulations. This Regulation limits the allowable emission of particulate matter from these boilers or oil heaters on a graduated scale depending on the Btu input.
2. This unit are subject to Section 1-151., Sulfur Dioxide Emissions from Fuel Burning Installations, of the Rules and Regulations. This Regulation limits all fuel burning units to 2.3 lbs of sulfur dioxide per million Btu input.
3. This unit are subject to Article IV, Visible Emissions, of the Rules and Regulations. This Article limits the visible emission from these units to 20% opacity.
4. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
5. If at any time, this facility should have a malfunction, that said facility will be shut down until said malfunction is corrected.
6. This permit shall become void in the event that any alterations are made to process from those submitted in approved plans, specifications, and other supporting data, to in the event there is a change of ownership, a new permit shall be applied for.
7. This permit shall become void in the event of conversion to another fuel.
8. The owner, or operator, shall submit all reports as may be required by the Board or this Agency. This report shall include the annual fuel usage and sulfur content, and shall be submitted within 30 days after the end of the calendar year.
9. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20401 Premise No. 00774 Registration No.

Permit for Boiler Location 95 Glenn Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Kewanee Type Gas Model

Rated Capacity 19,700 Btu/hr. Owners Identification No. 2

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Additions:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20401

1. This unit are subject to Section 1-138., Control of Particulate from Fuel Burning Source, of the Rules and Regulations. This Regulation limits the allowable emission of particulate matter from these boilers or oil heaters on a graduated scale depending on the Btu input.
2. This unit are subject to Section 1-151., Sulfur Dioxide Emissions from Fuel Burning Installations, of the Rules and Regulations. This Regulation limits all fuel burning units to 2.3 lbs of sulfur dioxide per million Btu input.
3. This unit are subject to Article IV, Visible Emissions, of the Rules and Regulations. This Article limits the visible emission from these units to 20% opacity.
4. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
5. If at any time, this facility should have a malfunction, that said facility will be shut down until said malfunction is corrected.
6. This permit shall become void in the event that any alterations are made to process from those submitted in approved plans, specifications, and other supporting data, to in the event there is a change of ownership, a new permit shall be applied for.
7. This permit shall become void in the event of conversion to another fuel.
8. The owner, or operator, shall submit all reports as may be required by the Board or this Agency. This report shall include the annual fuel usage and sulfur content, and shall be submitted within 30 days after the end of the calendar year.
9. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20462 Premise No. 00774 Registration No. _____
Permit for Boiler Location Glenn Bridge Road, Arden, NC
(equipment name)
Owner Day/Cadillac Submitted by Mr. Bob Young
Equipment Manufacturer York-Shipler Type Nat. gas Model 400 SPH
No. 2
Rated Capacity 33.5 MM Btu/hr. Owners Identification No. 3
Effective Date of this Permit Nov. 7, 1991
Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20462

1. This unit are subject to Section 1-138., Control of Particulate from Fuel Burning Source, of the Rules and Regulations. This Regulation limits the allowable emission of particulate matter from these boilers or oil heaters on a graduated scale depending on the Btu input.
2. This unit are subject to Section 1-151., Sulfur Dioxide Emissions from Fuel Burning Installations, of the Rules and Regulations. This Regulation limits all fuel burning units to 2.3 lbs of sulfur dioxide per million Btu input.
3. This unit are subject to Article IV, Visible Emissions, of the Rules and Regulations. This Article limits the visible emission from these units to 20% opacity.
4. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
5. If at any time, this facility should have a malfunction, that said facility will be shut down until said malfunction is corrected.
6. This permit shall become void in the event that any alterations are made to process from those submitted in approved plans, specifications, and other supporting data, to in the event there is a change of ownership, a new permit shall be applied for.
7. This permit shall become void in the event of conversion to another fuel.
8. The owner, or operator, shall submit all reports as may be required by the Board or this Agency. This report shall include the annual fuel usage and sulfur content, and shall be submitted within 30 days after the end of the calendar year.
9. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and identified as indicated below.

Permit No. 20424 Premise No. 00774 Registration No. _____

Permit for Baghouse Location 95 Gleen Bridge Road
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Fuller Type Jet Pulse Model 304-C10

Rated Capacity 30,000 CFM Owners Identification No. Fuller

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20420

Permit No. 20424

1. This permit is subject to Section 1-150. Particulate Matter Emissions From Miscellaneous Industrial Processes. This Regulation limits the allowable emission of particulate from this dust collection system depending on amount of material processed.
2. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
3. If at any time this facility should have a malfunction, that said facility will be shut down until the malfunction is corrected.
4. This permit shall become void in the event that any alterations are made to the process from those submitted in approved plans, specifications, and other supporting data to the event there is a change in ownership a new permit shall be applied for.
5. The owner or operator shall submit all reports as may be required by the Board of this Agency.
6. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20426 Premise No. 00774 Registration No.
Permit for Baghouse Location 95 Gleen Bridge Road, Arden, NC
(equipment name)
Owner Day/ Cadillac Submitted by Mr. Bob Young
Equipment Manufacturer Torit Type Pulse Jet Model 30 F 24
Rated Capacity 6650 CFM Owners Identification No. 1,2,3
Effective Date of this Permit Nov. 7, 1991
Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone, eb
Ronald Boone, Director

Permit Number 20426

Permit No. 20426

1. This permit is subject to Section 1-150. Particulate Matter Emissions From Miscellaneous Industrial Processes. This Regulation limits the allowable emission of particulate from this dust collection system depending on amount of material processed.
2. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
3. If at any time this facility should have a malfunction, that said facility will be shut down until the malfunction is corrected.
4. This permit shall become void in the event that any alterations are made to the process from those submitted in approved plans, specifications, and other supporting data to the event there is a change in ownership a new permit shall be applied for.
5. The owner or operator shall submit all reports as may be required by the Board of this Agency.
6. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and identified as indicated below.

Permit No. 20423 Premise No. 00774 Registration No.

Permit for Cure Ovens Location 95 Glenn Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Type Model

Rated Capacity 2500 #/cycle Owners Identification No. 1-4

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20423

1. This operation is subject to Article IV - Visible Emissions of the Rules and Regulations. This Article limits the allowable visible emission from this operation to no greater than 20 percent opacity.
2. This operation is subject to Article V - Odorous Emissions of the Rules and Regulations. This Article requires that suitable measures, approved by the WNC Regional Air Pollution Control Board, be used to control any odorous emissions.
3. This permit is subject to Section 1-150. Particulate Matter Emissions From Miscellaneous Industrial Processes. This Regulation limits the allowable emission of particulate from this lint collection system depending on amount of material processed.
4. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
5. If at any time, this facility should have a malfunction, that said facility will be shut down until said malfunction is corrected.
6. This permit shall become void in the event that any alterations are made to process from those submitted in approved plans, specifications, and other supporting data, to in the event there is a change of ownership, a new permit shall be applied for.
7. This permit shall become void in the event of conversion to another operation.
8. This owner, or operator, shall submit all reports as may be required by the Board or this Agency.
9. This permit is void until required fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20459 Premise No. 00774 Registration No.

Permit for Dust Collector Location Glenn Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Entrol Type Baghouse Model 6413V954

Rated Capacity 6000 CFM Owners Identification No. San Blanket DC

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20459

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20460 Premise No. 00774 Registration No.

Permit for Dust Collector Location Glenn Bridge Road, Arden
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Am. Air Type Baghouse Model 10-48-660
Filter

Rated Capacity 5000 CFM Owners Identification No. Sm. roll. dep

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20460

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and identified as indicated below.

Permit No. 20461 Premise No. 00774 Registration No. _____

Permit for Dust Collector Location Glenn Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer Am. Air Type Scrubber Model Size 12 Type N
Filter

Rated Capacity 12000 CFM Owners Identification No. Porous Roll

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone, Jr.
Ronald Boone, Director

Permit Number 20461

Permits To Construct: Permit Nos. 20459, 20460, 20461

1. This permit is subject to Section 1-150. Particulate Matter Emissions From Miscellaneous Industrial Processes. This Regulation limits the allowable emission of particulate from this dust collection system depending on amount of material processed.
2. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
3. If at any time this facility should have a malfunction, that said facility will be shut down until the malfunction is corrected.
4. This permit shall become void in the event that any alterations are made to the process from those submitted in approved plans, specifications, and other supporting data to the event there is a change in ownership a new permit shall be applied for.
5. The owner or operator shall submit all reports as may be required by the Board of this Agency.
6. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and identified as indicated below.

Permit No. 20398 Premise No. 00774 Registration No.

Permit for VOC Reclamation Location 95 Glenn Bridge Road, Arden, NC
(equipment name)

Owner Day/Cadillac Submitted by Mr. Bob Young

Equipment Manufacturer VARA Type Model TA-45-400-H

Rated Capacity 40,000 CFM Owners Identification No.

Effective Date of this Permit Nov. 7, 1991

Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 20398

CONDITIONS FOR PERMIT NO. 20398

1. This plant is subject to Section 1-155- Emission from Operations Involving Photochemically Reative Solvents. This section requires 85% capture and reduction of emissions of photochemically reactive (Toluene) solvents, if that emission is greater than 40 pounds per day. This plant is limited to 180 tons of Toluene emissions per year.
2. Should the proposed New Source Performance Standard (40 CFR 60 Subpart VVV-Standards of Performance for Polymeric Coatings of Supporting Substrates- April 30, 1987) be enacted, this plant must adhere to this new standard, including testing.
3. This permit covers the VOC emissions from the blanket spreading department only. A new application must be filed with this agency for any other potential sources of air pollution at this site.
4. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
5. If at any time this facility should have a malfunction, that said facility will be shut down until said malfunction is corrected.
6. This permit shall become void in the event that any alterations are made to process from those submitted in approved plans, specifications, and other supporting data, to in the event there is a change of ownership, a new permit shall be applied for.
7. This permit shall become void in the event of conversion to another fuel.
8. This permit is void until required permit fee is paid.

WESTERN NORTH CAROLINA REGIONAL AIR POLLUTION CONTROL AGENCY

BUNCOMBE COUNTY COURTHOUSE

ASHEVILLE, NC 28801-3569

PERMIT TO OPERATE

Permission is hereby granted to operate that air contamination source and/or air cleaning device as indicated below and outlined in plans and specifications on file in the office of the Western North Carolina Regional Air Pollution Control Agency which were previously submitted with application to construct and indentified as indicated below.

Permit No. 20245 Premise No. 00774 Registration No. _____
Permit for Baghouse Location 95 Glenn Bridge Road, Arden, NC
(equipment name)
Owner Day/Cadillac Submitted by Mr. Bob Young
Equipment Manufacturer Troit Type _____ Model 40 F 48
Rated Capacity 22,500 CFM Owners Identification No. Banburry
Effective Date of this Permit Nov. 7, 1991
Expiration Date of this Permit Nov. 30, 1993

This Permit to Operate is issued subject to the following conditions:

Conditions Attached:

This Operating Permit does not exempt any person, firm or corporation from their responsibility of complying with or from the penalties for violation of the Standards, Rules and Regulations, and conditions of the Western North Carolina Regional Air Pollution Agency, nor prevent or limit the application of Regulation No. 7 entitled, "Air Pollution Emergencies".

WESTERN NORTH CAROLINA REGIONAL
AIR POLLUTION CONTROL AGENCY

By Ronald Boone
Ronald Boone, Director

Permit Number 40245

Permit No. 20245

1. This permit is subject to Section 1-150. Particulate Matter Emissions From Miscellaneous Industrial Processes. This Regulation limits the allowable emission of particulate from this dust collection system depending on amount of material processed.
2. This permit shall become void if the facility is not maintained and operated at all times so that the overall reduction in air pollutants, in accordance with applicable standards, is achieved.
3. If at any time this facility should have a malfunction, that said facility will be shut down until the malfunction is corrected.
4. This permit shall become void in the event that any alterations are made to the process from those submitted in approved plans, specifications, and other supporting data to the event there is a change in ownership a new permit shall be applied for.
5. The owner or operator shall submit all reports as may be required by the Board of this Agency.
6. This permit is void until required permit fee is paid.

REFERENCE 22

COPY
12-19-91

ENVIROCHEM
ENVIRONMENTAL SERVICES, INC.

PROJECT REPORT

DAY INTERNATIONAL
ARDEN, NORTH CAROLINA

PROJECT SUMMARY

Mercury Decontamination Project
Day International
Arden, North Carolina

CASE HISTORY:

Day International's Arden, North Carolina facility currently manufactures textile products. However, previous owners were conducting a thermometer filling process as part of their manufacturing operations. During this operation in which elemental mercury was used, there were incidental spills and leaks of mercury. Also, mercury vapors had deposited in various areas of the facility.

Enviro-Chem Environmental Services, Inc. was called upon to do initial site investigation and through analysis to determine the extent and degree of contamination (See Attachment A).

Upon receiving completed laboratory data, Enviro-Chem submitted a proposal to Day International to decontaminate and remove contaminated material from designated areas.

The project proposal was approved by Day International and the project was scheduled to begin on April 3, 1989 (See Project Outline).

Upon Completion of the decontamination process, soil samples were taken from the excavated area and swipe samples were taken from rinsate used in the wash down procedure.

In addition, a separate analysis was performed on concrete removed from the trench area. This proved the concrete to be clean and to require no special handling or disposal (See Attachment C).

All wastes generated during clean-up that have been determined to be hazardous have been profiled for approval at Chemical Waste Management's facility in Emelle, Alabama.

PROJECT REPORT
INITIAL SITE INVESTIGATION

Mr. Walt Probst
Day International

January 3, 1989

At 9:00 am, I, Luke Vechnak, was handed the work order contract number 764. The service truck was loaded with safety supplies and equipment. I went by the bank for expense monies and had rooms reserved at Holiday Inn in Asheville, NC.

Reggie Orr, Dan LaMontagne, and myself left Apex, NC at 2:30 pm and arrived in Asheville at 6:30 pm. Checked into the Holiday Inn and met with Jerry Deakle at 7:30 pm.

January 4, 1989

At 6:00 am, had a breakfast briefing with Jerry, Dan, Reggie, and myself. Arrived at Day International at 7:00 am, checked in with the guard, and proceeded to the contaminated area. Jerry Deakle set up a safety zone and assessed the job.

Set up the equipment, removed and vacuumed blocks from the trench, and placed them on poly. Bore the concrete floor for samples, removed dirt from the trench, and placed it in 17-H drums. Broke for lunch and met with Jerry and Mike O'Steen.

Suited up, broke the blocks, and placed them in 17-H drums. Set up the mercury vac pump and gathered pools of mercury from the trench.

Bore samples 6 inches outside of the trench; decontaminated, and loaded the concrete bore for return.

Met with Jerry, Mike, and Walt. Used the Hepa Vac to clean the mercury, soil, and debris from the trench. At 5:00 pm, went back to the motel, decontaminated, and had dinner. Had a progress briefing with Jerry at 7:00 pm.

**NOTE: Boring device was cooled with the water vac and placed in 17-H drum.

January 5, 1989

At 7:00 am, had a briefing with Jerry, Dan, Reggie, and myself. Drove to the Day International job site. At 8:45 am, suited up and checked the trench for mercury seepage.

****NOTE:** Large beads of mercury from pipe to wall.

Met with Walt for access to the roof for sampling, around and

in, roof vents numbers 6 and 7.

Vacuumed the contaminated area, took duct and core samples. Performed a floor sweep, a rafter sweep and a wall sweep. Broke for lunch at 12:00 noon.

Capped and moved drums, then met with Jerry, Mike, Walt, and Day International officials. Noticed mercury in trench at vapor bearer.

Discussed cutting concrete two feet along trench and wall. Decided to use hammer drill and take samples.

At 4:30 pm, went to pick up equipment for further sampling. Returned to the motel, decontaminated and had a lobby briefing with Jerry, Mike, Dan, Reggie, and myself.

January 6, 1989

At 7:00 am, had breakfast and checked out of one room. Drove to the job site; arrived at 8:40 am.

Suited up and started drilling a series of sample holes. Removed soil under the concrete in trench. Noticed mercury in small pockets, and mercury beads throughout the soil. Took a composite sample. The hammer drill broke.

At 11:30 am, returned the broken equipment and rented a core borer and a two inch bit. Had lunch, returned to job site, and called the office with a progress report.

Started the core borer very slowly. Called the office for additional supplies, and informed them that Walt was not happy with the slow drilling process.

Sent Reggie to return the borer. Dan and myself cleaned up, and stowed the gear and equipment.

Went back to the hotel, decontaminated, and checked out of the motel at 5:00 pm. Drove to Apex; arrived at 11:57 pm.

January 9, 1989

At 8:00 am, loaded equipment, picked up hammer drill, and drove to Asheville. Checked into the motel at 5:30 pm.

January 10, 1989

At 6:30 am, had a breakfast briefing with Reggie and myself. Arrived at Day International at 7:45 am. Suited up and started the sampling procedure.

Broke for lunch at 11:45 pm. Picked up sampling containers and sample rods. Called the office with a progress update.

At 2:00 pm, proceeded with the sampling, then cleaned mercury contaminated soil out of the trench. Had a conference with Walt. Stowed the gear and returned to the motel at 6:30 pm for decontamination.

January 11, 1989

At 6:00 am, had a breakfast briefing. Arrived at the job site at 6:40 am. Suited up and started sampling. Vacuumed the trench, then decontaminated and stowed the gear.

Had a lunch meeting with Reggie, Mike, and myself. Filled out the work order, and went to get a signature. Returned to the motel, decontaminated, and checked out. Drove to Apex; arrived at 7:59 pm.

January 12, 1989

Sent off 40 samples for total analysis.

This is a summary of the work performed for Day International.

Luke Vechnak

January 10, 1989

At 6:30 am, had a breakfast briefing with Reggie and myself. Arrived at Day International at 7:45 am. Suited up and started the sampling procedure.

Broke for lunch at 11:45 pm. Picked up sampling containers and sample rods. Called the office with a progress update.

At 2:00 pm, proceeded with the sampling, then cleaned mercury contaminated soil out of the trench. Had a conference with Walt. Stowed the gear and returned to the motel at 6:30 pm for decontamination.

January 11, 1989

At 6:00 am, had a breakfast briefing. Arrived at the job site at 6:40 am. Suited up and started sampling. Vacuumed the trench, then decontaminated and stowed the gear.

Had a lunch meeting with Reggie, Mike, and myself. Filled out the work order, and went to get a signature. Returned to the motel, decontaminated, and checked out. Drove to Apex; arrived at 7:59 pm.

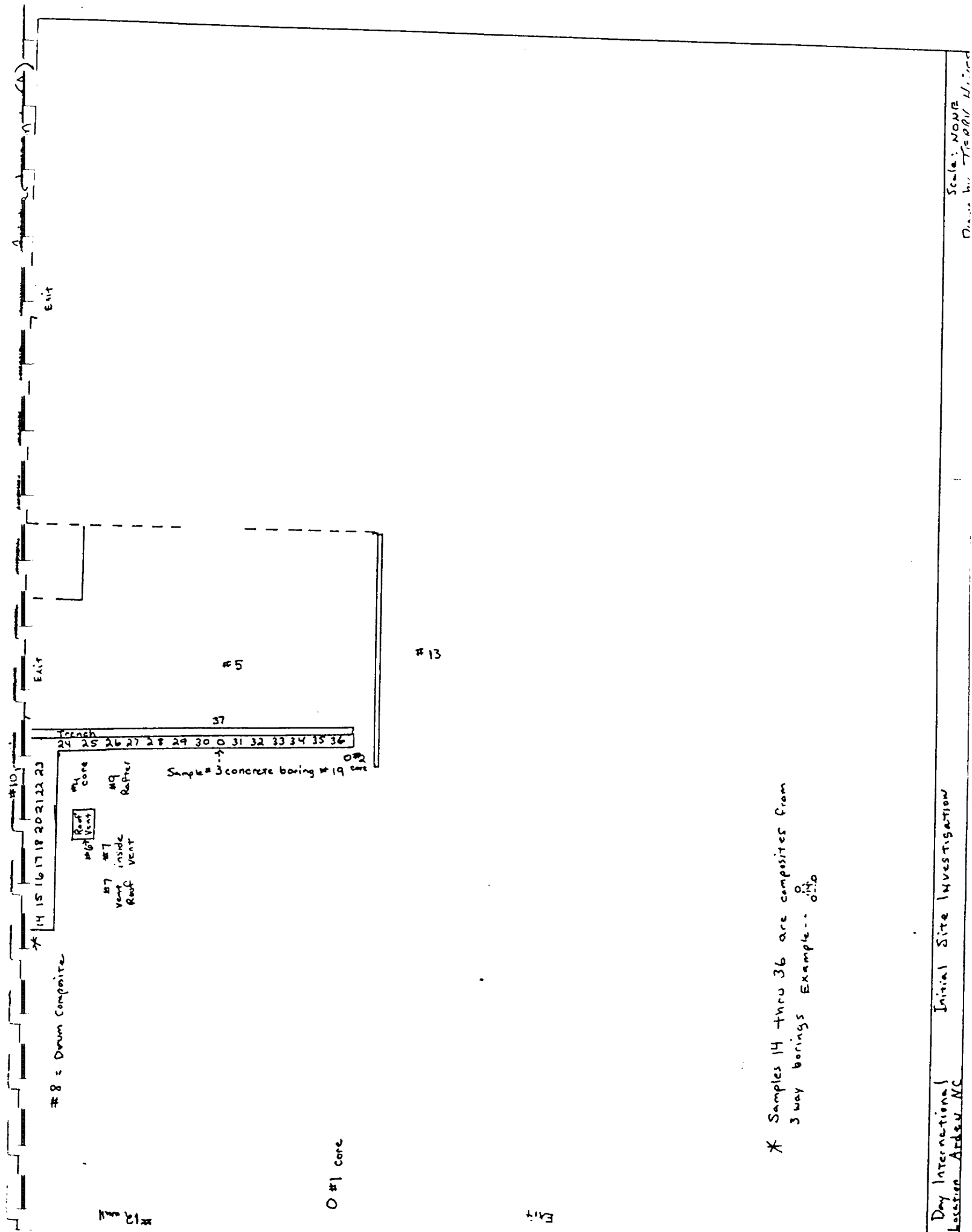
January 12, 1989

Sent off 40 samples for total analysis.

This is a summary of the work performed for Day International.

Luke Vechnak

ATTACHMENT A



Scale: NONE
 Drawn by: T. B. R. H. Inc.

* Samples 14 thru 36 are composites from
 3 way borings Example -- 0.125

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 1 OF 7

RECEIVED JAN 25 1989

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

1. TLV CORE #1 1-5-89 ~~core~~
2. TLV CORE #2 1-5-89 ~~core~~
3. TLV CORE #3 1-5-89 ~~core~~
4. TLV CORE #4 1-5-89 ~~core~~
5. TLV CORE #5 1-5-89 ~~core~~
6. TLV CORE #6 1-5-89 VENT ROOF

RESULTS

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
mercury, as Hg, PPM	.306/ .243	.310	65.4/ 135	11.9	.466	1130

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 2 OF 7

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

- 7. TLV #6 1-5-89 VENT INSIDE ✓
- 8. TLV #7 1-5-89 VENT ROOF ✓
- 9. TLV #7 1-5-89 VENT INSIDE ✓
- 10. TLV #8 1-5-89 DRUM COMP ✓
- 11. TLV #9 1-5-89 RAFTERS ✓
- 12. TLV #10 1-5-89 WALL ✓

RESULTS

	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
Mercury, as Hg, PPM	5310	9330	40.1	13100 / 3540	264	270

Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 3 OF 7

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

- 13. TLV #11 1-5-89 FLOOR ✓
- 14. TLV #12 1-5-89 WALL ✓
- 15. TLV #13 1-5-89 FLOOR ✓
- 16. TLV #14 1-6-89 HOLE ✓
- 17. TLV #15 1-6-89 HOLE ✓
- 18. TLV #16 1-6-89 HOLE ✓

RESULTS

	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
Mercury , as Hg , PPM	74.8	9.44	32.7	5.05/ 3.68	24.6	1.57/ 24.9

Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 4 OF 7

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

19. TLV #17 1-6-89 HOLE —
20. TLV #18 1-6-89 HOLE —
21. TLV #19 1-6-89 concrete boring
22. TLV #20 1-6-89 —
23. TLV #21 1-6-89 —
24. TLV #22 1-6-89 —

RESULTS

	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>
Mercury, as Hg, PPM	18.4/ 20.5	14.2	82.0	29.8	229	8460

Laboratories, Inc.

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

Analytical and Consulting Chemists
1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 5 OF 7

P.O. # 686

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

- 25. TLV #23 1-10-89 —
- 26. TLV #24 1-10-89 —
- 27. TLV #25 1-10-89 —
- 28. TLV #26 1-10-89 —
- 29. TLV #27 1-10-89 —
- 30. TLV #28 1-10-89 —

RESULTS

Mercury , as Hg , PPM

<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
6.93	4.35	8.74	8.69.	11.4	8.67

Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 6 OF 7

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

- 31. TLV #29 1-10-89 —
- 32. TLV #30 1-10-89 —
- 33. TLV #31 1-10-89 —
- 34. TLV #32 1-10-89 —
- 35. TLV #33 1-11-89 —
- 36. TLV #34 1-11-89 —

RESULTS

Mercury, as Hg, PPM

<u>31</u>	<u>32</u>	<u>33</u>	<u>34</u>	<u>35</u>	<u>36</u>
9.06	4.78	10200	20.6	1.65	1.68

Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 1-16-89
DATE REPORTED 1-24-89
89W4400

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 7 OF 7

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 686

ATTENTION: JERRY DEAKLE

SAMPLE DESCRIPTION: 40 MERCURY SAMPLES

- 37. TLV #35 1-11-89 ✓
- 38. TLV #36 1-11-89 ✓
- 39. TLV #37 1-11-89 ✓
- 40. DAY INTERNATIONAL ARDES NC REF 764 WATER 1-11-89

RESULTS

	<u>37</u>	<u>38</u>	<u>39</u>	<u>40</u>
Mercury , as Hg , PPM	1.69	1.47	85900	40.7

NOTE: SAMPLES DO NOT APPEAR TO BE HOMOGENEOUS AS INDICATED BY SOME OF THE
PLICATE ANALYSIS. HOWEVER EFFORTS TO HOMOGENIZE ARE NOT PRACTICAL.
PLICATE MEANS FROM THE BALANCE.

Roger C. Oxford

ROGER C. OXFORD , CHEMIST

ATTACHMENT B

PROJECT REPORT
DAY INTERNATIONAL
ARDEN, NORTH CAROLINA

Mercury Decontamination Project
April 3, 1989 to April 14, 1989

OBJECTIVE - Decontamination of area previously used for mercury operations

PROJECT OUTLINE -

April 3, 1989

Set up equipment for decontamination. Sealed off all exits from room. Sealed off electrical bar.

April 4, 1989

Cut trench in floor for removal of contaminated soil area - approximately 2' x 28'.

April 5, 1989

Removed broken cement and placed in B-25 storage container. Excavated contaminated soil from trench.

April 6, 1989

Sent sample of concrete for analysis at Oxford Labs. Completed excavation of contaminated soil from trench. Took 3 soil samples along trench at surface to 6" depths.

April 7, 1989

Sealed off trench line to prevent water entering during pressure washing operations. Sealed off all electrical panels.

April 10, 1989

Began pressure washing operations utilizing 2500 psi high pressure washer. Rinsate was vacuumed as it accumulated and transferred to poly storage tanks.

April 11, 1989 thru April 13, 1989

Continued gross washing operations. Washed entire room including walls, ceilings and floors. Removed and washed contaminated duct work. Applied HgX Solution to entire room utilizing a chemical feed system on pressure washer unit. Solution was mixed to 30% concentration. Completed decontamination process.

April 14, 1989

Removed all equipment and supplies. Performed swipe sampling of walls and ceilings (See attachment B). Collected sample of rinsate from poly tank. Reported completion of project to client.

(2) wall
2' x 28' trench (11)
Exit
(10) wall
Exit
(9) wall

(14) rafter
(19) rafter
(20) rafter

wall (8)

(13) wall

(15) rafter
" (17) rafter
(21) rafter

Exit

wall (7)

wall (1)

(16) rafter
(18) rafter
(22) rafter

(2) wall

wall (6)

(3) wall
(4) wall
(5) wall

Mercury decontamination project: Day International
Location: Arden NC
Scale: NONE
Drawn by: Terry Hines

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89
DATE REPORTED 4-24-89
89W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 1 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX, N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

RECEIVED 4/24/89

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

1. A - SOIL
2. B - SOIL
3. C - SOIL
4. RINSATE WATER
5. #1 WALL
6. #2 WALL

RESULTS

RESULTS: ON EPA LEACHATE

Mercury, as Hg, PPM

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
<.0010	<.0010	.0108	X	X	X

RESULTS: AS RECEIVED

Mercury, as Hg, PPM

X	X	X	4.50	X	X
---	---	---	------	---	---

Mercury, as Hg, Total ug

X	X	X	X	6.53	5.47
---	---	---	---	------	------

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89
DATE REPORTED 4-24-89
89W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 2 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

- 7. #3 WALL
- 8. #4 WALL
- 9. #5 WALL
- 10. #6 WALL
- 11. #7 WALL
- 12. #8 WALL

RESULTS

7 8 9 10 11 12

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug	13.9	17.0	.960	3.29	5.14	2.15
--------------------------	------	------	------	------	------	------

:

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89
DATE REPORTED 4-24-89
89W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 3 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

- 13. #9 WALL
- 14. #10 WALL
- 15. #11 WALL
- 16. #12 WALL
- 17. #13 WALL
- 18. #14 RAFTER

RESULTS

<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
-----------	-----------	-----------	-----------	-----------	-----------

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug	2.47	1.64	17.4	332	5.14	.870
--------------------------	------	------	------	-----	------	------

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89
DATE REPORTED 4-24-89
89W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 4 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

19. #15 RAFTER
20. #16 RAFTER
21. #17 RAFTER
22. #18 RAFTER
23. #19 RAFTER
24. #20 RAFTER

RESULTS

RESULTS: AS RECEIVED

	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>
Mercury, as Hg, Total ug	10.0	.508	.974	.715	2.57	.715

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

DATE RECEIVED 4-18-89
DATE REPORTED 4-24-89
89W5661

1316 South Fifth Street
Wilmington, N.C. 28401
(919) 763-9793

PAGE 5 OF 5

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 00050

ATTENTION: TERRY HINES

SAMPLE DESCRIPTION: 26 DAY INTERNATIONAL - MERCURY

25. #21 RAFTER
26. #22 RAFTER

RESULTS

25 26

RESULTS: AS RECEIVED

Mercury, as Hg, Total ug

.819 .508


ROGER C. OXFORD , CHEMIST

ATTACHMENT C

Oxford Laboratories, Inc.

Analytical and Consulting Chemists

1316 South Fifth Street

Wilmington, N.C. 28401

(919) 763-9793

DATE RECEIVED 4-14-89

DATE REPORTED 4-20-89

89W5570

RECEIVED APR 24 1989

PAGE 1 OF 1

ENVIROCHEM
1005 INVESTMENT BLVD
APEX , N.C. 27502

P.O. # 110

ATTENTION: T. GRIFFIN

SAMPLE DESCRIPTION: CONCRETE - DAY INTERNATIONAL

1. CONCRETE

RESULTS

1

Results on Leachate

Mercury , as Hg , PPM

<.0005

Roger Oxford

ROGER C. OXFORD , CHEMIST

REFERENCE 23

Friday
December 14, 1990

Registered

Part II

Environmental Protection Agency

40 CFR Part 300

Hazard Ranking System; Final Rule

REFERENCE 24

SCDM
Summary Tables
10/29/91

REFERENCE 25

MEMORANDUM

To: Superfund Section Staff

From: Hal Bryson *Hal*

Date: August 17, 1992

Subject: Update on Status of Well Head Protection Programs in N.C.

Carl Bailey of the DEM's Groundwater Section has provided me with the following information regarding the establishment of Well Head Protection Areas (WHPAs) in North Carolina:

- Currently there are no WHPAs in North Carolina.
- A number of local governments in the state have been funded by EPA "demonstration grants" to initiate the development of local Well Head Protection Programs; however, the formal designation of WHPAs can not be initiated until the Groundwater Section has a program approved by EPA -- such approval would grant authority to the DEM to formally establish WHPAs in local areas.
- Formal approval by EPA of the Groundwater Section's WHPA Program is expected within 12 to 18 months.
- Counties currently attempting to develop local WHPA programs include Bladen, Buncombe, Columbus, Gaston, Lee, Moore, Randolph, Robeson, Scotland, and Stokes.

The Superfund Section should contact Mr. Bailey in another year or so to update this information.

HCB\whpamem

REFERENCE 26

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

**BUNCOMBE COUNTY,
NORTH CAROLINA
(UNINCORPORATED AREAS)**

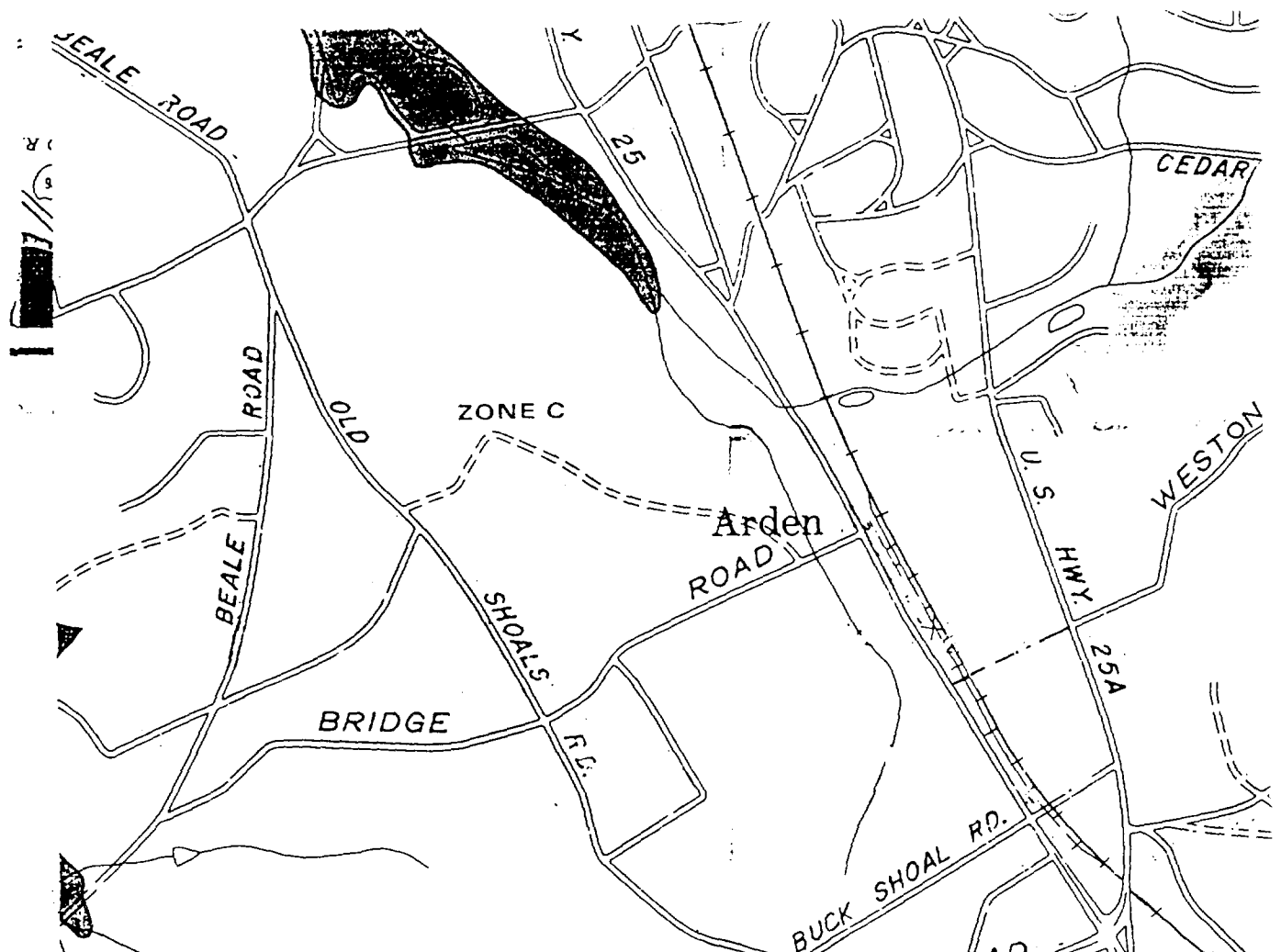
PANEL 230 OF 275

COMMUNITY-PANEL NUMBER
370031 0230 B

EFFECTIVE DATE:
AUGUST 1, 1980



federal emergency management agency
federal insurance administration



***EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AD	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

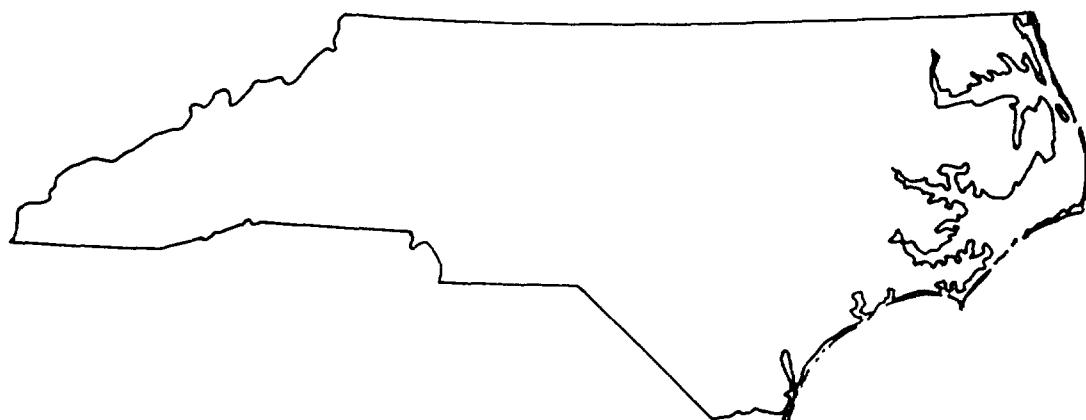
Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

REFERENCE 27



Water Resources Data North Carolina Water Year 1988

Reference 27



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-88-1
Prepared in cooperation with the North Carolina Department
of Natural Resources and Community Development, and
with other State, municipal, and Federal agencies

571-4600

329 BINGHAM 329 to

TENNESSEE RIVER BASIN
03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'33", long 82°34'43", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream from bridge on U.S. Highways 19 and 23, 3.2 mi downstream from Swannanoa River, and at mile 145.8.

DRAINAGE AREA.--945 mi².

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M), 1927(M).

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft above National Geodetic Vertical Datum of 1929. Sept. 17, 1895 to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903 to July 15, 1916, and Jan. 1, 1917 to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi upstream at datum 11.52 ft higher. Oct. 1, 1922 to Aug. 9, 1930, nonrecording gage at present site and datum. The National Weather Service has telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 34.5 ft³/s (station 03451000), of which 37.0 ft³/s was discharged as treated effluent 4 mi downstream from station. Slight diurnal fluctuation and occasional slight regulation at low flow caused by powerplant 46 mi upstream and small reservoirs above station. Maximum discharge, 110,000 ft³/s, from floodmarks, from rating curve extended above 43,000 ft³/s. Minimum discharge, 239 ft³/s, occurred several days in August and September 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988, DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	560	1310	1310	1490	1010	973	1030	586	639	486	517
2	871	528	1200	1270	1530	1060	1000	962	598	653	468	500
3	736	530	1080	1240	1640	1040	1030	935	588	499	460	446
4	699	544	1030	1310	1790	1020	2180	956	564	505	450	793
5	669	546	1010	1290	1940	1020	2680	1050	549	625	648	1260
6	668	530	956	1130	1720	955	1890	1080	544	585	1220	968
7	660	522	904	1050	1500	942	1670	976	535	512	1020	687
8	681	512	904	1020	1500	998	1540	894	500	471	908	562
9	654	492	910	e1220	1450	1030	1430	860	521	436	695	512
10	644	1060	1080	e1130	1370	1080	1350	898	579	422	668	528
11	615	1690	1270	1080	1340	1120	1270	929	591	471	652	510
12	581	1060	1170	e1080	1320	1080	2640	855	499	620	641	462
13	589	801	1030	1120	1260	1220	3310	826	445	807	605	478
14	599	739	976	1120	1240	1240	2430	878	439	667	500	470
15	583	647	1530	1090	1220	1070	2120	869	456	524	451	455
16	578	595	2910	1010	1340	1030	1890	885	475	447	618	433
17	567	1700	2050	1010	1280	1000	1700	1000	569	629	606	580
18	557	2950	1570	1710	1220	1000	1600	1050	576	587	501	908
19	530	1970	1400	2640	1220	1120	1750	977	677	735	466	860
20	560	1450	1320	5900	1330	1080	1790	885	599	607	545	698
21	589	1240	1260	6200	1310	951	1560	801	562	645	652	665
22	586	1090	1250	5250	1200	944	1460	762	588	805	580	558
23	573	1010	1210	3180	1180	958	1400	743	508	1100	572	517
24	569	988	1140	2430	1200	985	1380	750	522	756	570	497
25	551	908	1300	2170	1200	1030	1280	743	639	612	531	495
26	544	893	1420	1990	1160	1260	1210	751	695	582	484	473
27	567	955	1310	1760	1140	1160	1230	702	569	546	480	452
28	621	1190	1380	1640	1020	954	1170	688	510	549	342	458
29	612	1450	1610	1600	977	896	1120	674	469	523	357	454
30	588	1480	1490	1540	---	925	1080	633	453	577	536	461
31	583	---	1340	1510	---	979	---	597	---	516	536	---
MEAN	633	1021	1301	1903	1348	1037	1638	859	547	602	589	589
MAX	1200	2950	2910	6200	1940	1260	3310	1080	695	1100	1220	1260
MIN	530	492	904	1010	977	896	973	597	439	422	342	433
IN.	.77	1.21	1.59	2.32	1.54	1.27	1.93	1.05	.65	.73	.72	.70

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1569	1599	2109	2365	2629	2958	2743	2179	1853	1708	1683	1462
MAX	7025	5121	5700	6068	5201	7928	5705	4961	5774	11500	8362	4967
(WY)	1965	1980	1915	1937	1899	1899	1973	1909	1909	1916	1901	1906
MIN	352.8	507.2	635.8	547.9	1083	1037	973.0	859.3	546.8	559.0	327.8	345.9
(WY)	1955	1932	1956	1956	1931	1988	1986	1988	1988	1986	1925	1954

SUMMARY STATISTICS

FOR 1988 WATER YEAR

FOR PERIOD OF RECORD

AVERAGE FLOW	1004	2065
HIGHEST ANNUAL MEAN	6200	3671
LOWEST ANNUAL MEAN	342	1004
HIGHEST DAILY MEAN	7340	66000
LOWEST DAILY MEAN	4.89	239
INSTANTANEOUS PEAK FLOW	330	110000
INSTANTANEOUS PEAK STAGE	14.4	23.10
INSTANTANEOUS LOW FLOW	1590	239
ANNUAL RUNOFF (INCHES)	912	29.7
10 PERCENTILE	463	3630
50 PERCENTILE		1620
95 PERCENTILE		643


* See REMARKS.

REFERENCE 28

MEMO

DATE: November 6, 1992

TO: File

FROM: Harry Zinn 

RE: Fisheries in the Vicinity of Sybron Arden
Arden, Buncombe County, North Carolina
NCD 002 221 703

On November 6, 1992 I talked to Mr. Micky Clemmons (704-452-0422), a Biologist of the North Carolina Wildlife Resources Commission, concerning fishing in the vicinity of the Sybron Arden site. Mr. Clemmons stated that no fishing occurs on the unnamed stream which runs from the site to Lake Julian. Lake Julian is a warm water fishery which was originally stocked by the Carolina Power and Light Company (CP&L). No further stocking has taken place, however, a moderate level of fishing continues on the lake. No fishing occurs on the short segment of stream between the lake and the French Broad River. The French Broad River is used for fishing, boating and swimming.

HZ\gj

REFERENCE 29



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

August 16, 1989

Department of Environment, Health and
Natural Resources
Solid and Hazardous Waste Division
Raleigh, North Carolina



ATTENTION: Doug Holyfield

Dear Mr. Holyfield:

This is to confirm our telephone conversation regarding the mercury vapor exposures at Day International. The exposures you quoted to me ranged from 0.01 to 0.02 mg/m³. This is below the current standard of 0.1 mg/m³ and the standard taking effect September 1, 1989 of 0.05 mg/m³. The presence of mercury vapor does indicate the continued presence of mercury at the site and periodic monitoring may be necessary to see if there is any change with time. If you have further questions on this or other Occupational Issues, please contact us at (919) 733-3680.

Sincerely,

Romie L. Herring, CIH
Industrial Hygiene Consultant
Occupational Health Branch

RLH/ebe

cc: Engineering File

DEPARTMENT OF HUMAN RESOURCES _____ RUSH

TO Deugs

DATE 9-20 TIME 8:55

WHILE YOU WERE OUT
M Col Dzierzynski
OF _____
PHONE 704 687 4336

☒ TELEPHONED

☒ PLEASE PHONE

☐ WANTS TO SEE YOU

☐ WILL CALL AGAIN

☐ CAME TO SEE YOU

☐ RETURNED YOUR CALL

MESSAGE

OK
Body basis air monitoring
- sealed by paint
- Notice noting that if the
wall is ever removed &
contaminated -> hazardous waste

DHR 0011 (Rev. 7-77)

BY

Beverlie

REFERENCE 30

G
NCD 986 166 361

(12)

P.O. BOX 1077
ARDEN, N.C. 28704(704) 687-2485
FAX: (704) 687-4322

RECEIVED

HAZARDOUS WASTE SECTION

November 28, 1989

Mr. Jerry Rhodes
Chief of Hazardous Waste Management Section
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES
P.O. Box 2091
Raleigh, North Carolina 27602-2091

Dear Mr. Rhodes:

As per our agreement made by telephone on September 21, 1989, DAY International is to monitor quarterly the vapor levels at and around the east wall of the former mercury fill room. This area was utilized by the former occupants and building owner for filling temperature indicator tubes. DAY International does not and has not used mercury in any of its processes in this or any other areas of the plant.

Please see the attached memo addressing the requested test. Our next test will be submitted in January of 1991. If you have any questions, please contact me at (704) 687-4336.

Respectfully,
DAY International

A handwritten signature in dark ink, appearing to read "Ed Dzierzynski".

Ed Dzierzynski

cc: Jim Mann
Bill Mincey

1153U



DATE October 3, 1989

Upfront

INTER-HOUSE CORRESPONDENCE

TO: Ed Dzierzynski

SUBJECT: MERCURY VAPOR - DAYCOLLAN/POROUS ROLL DEPARTMENT

Per your request, the above mentioned department was tested for the presence of mercury vapor. A Jerome Model 411 gold film mercury vapor analyzer was used. Starting on September 27 and for the next two days, a general survey was made of the area at different times of the day (first shift). Readings were taken in the overhead, at breathing and floor levels.

No mercury vapor was indicated. All readings with the analyzer were zero.


Walt Probst

0553E

REFERENCE 31



RECEIVED
JAN 31 1990

HAZARDOUS WASTE SECTION

Reference 31

G 13
Day International

P.O. BOX 1077
ARDEN, N.C. 28704

(704) 687-2485
FAX: (704) 687-4322

January 29, 1990

Mr. Jerry Rhodes
Chief of Hazardous Waste Management Section
NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES
P.O. Box 2091
Raleigh, North Carolina 27602-2091

Dear Mr. Rhodes:

RE: Quarterly Mercury Monitor: Letter 11/28/89

The quarterly monitor of mercury vapor levels in our Daycollan/Porous Rolls area was conducted on January 12, 15, 16, and 17, 1990. Again results indicated zero mercury vapor present. The same procedure was used in our previous tests.

It is our intention to discontinue these tests and to install signs on both sides of the east wall of the Porous Roll Department. The sign wording will restrict any work on the wall without prior approval by the Engineering Department who will notify your office of the proposed work.

Respectfully,

R.D. Young
Engineering Manager
DAY International

Attachment

cc: J. Mann
B. Mincey

1186U



DATE January 23, 1990

Upfront

INTER-HOUSE CORRESPONDENCE

TO: Ed Dzierzynski

cc: R. Young

SUBJECT: MERCURY VAPOR - DAYCOLLAN/POROUS ROLL DEPARTMENT

To follow upon on the report of October 3, 1989 on the above subject, a recent survey was conducted on January 12, 15, 16, and 17, 1990 in the Daycollan/Porous Roll area. The same procedure was used as in the previous tests.

Results of the survey indicate no mercury vapor as being present in this area.

Walt Probst

A handwritten signature in cursive script that reads "Walt Probst".

0630E

MAR 17 1992

4WD-WPB

Mr. Rudolph C. Gabel
Rudolph C. Gabel, Inc
39 Wendover Road
Rochester, New York 14610

RE: 4-RIN-0733-92

Dear Mr. Gabel:

This is in response to your Freedom of Information Act (FOIA) request for information pertaining to the Sybron-Arden site, Arden, Buncombe County, North Carolina (NCD002221703) from Region IV files.

Please find enclosed the requested material.

Fees are waived as de-minimis.

Should you have questions, please call Craig Benedikt at (404) 347-5065.

Sincerely yours,

H. Kirk Lucius
Freedom of Information ficer

Enclosure

cc: FOIA Office

CB:m:03/11/92x5065 Disk: Benedikt.WP Doc: 0733

BENEDIKT DEIHL HANKE LUCIUS



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

9 December 1987

Mr. Scott Gardner
EPA NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Gardner:

RE: Preliminary Assessment Report
Sybron Arden
NCD002221703

Enclosed please find the Preliminary Assessment report for the subject site. This priority is based on review of available data.

The Sybron Arden site is a 90 acre site located in Arden, North Carolina, in Buncombe County. The company built the facility in 1964 and began operations that same year. The property was vacant farmland prior to Sybron Arden.

Sybron Arden manufactures medical and scientific instruments which includes thermometers, hydrometers, wind scopes, stethoscopes, blood pressure gauges and cups, and dental chairs. Taylor TCA, a division of Sybron which is also located at the same facility manufactures thermometers. In June of 1971 Taylor TCA disposed of approximately 14 drumloads of crushed thermometers containing residual mercury on the site. The contents of the drums were emptied into a pit with dimensions of 6'x 6'x 3.5'. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee. Test were conducted on soil samples from the disposal area and confirmed the presence of glass and mercury in the soil. On December 12, 1986, the company filed a 103 (c) notification for the on-site hazardous waste disposal area with the NC Solid and Hazardous Waste Management Branch. The company decided to do a voluntary cleanup of the pit, under the guidance of the Branch.

Mr. Scott Gardner
9 December 1987
Page 2

Waste that had been disposed of in the pit was removed along with soil from the pit. The pit was excavated from its original size of 6'x 6'x3.5' to 12'x 8'x 6' in an attempt to remove mercury that may have leached into the soils. The soil and waste removed from the pit were manifested to Emelle, Alabama for disposal. Post excavation samples were collected from the pit, after the waste removal. Sybron split samples with the NC Solid and Hazardous Waste Management Branch. Laboratory analyses indicated mercury contamination in excess of .002 ppm in a sample collected from the floor of the pit and two from the west walls of the pit. The NC Solid and Hazardous Waste Management Branch recommended additional removal of soil from the west wall and floor areas of the pit, and subsequent post-excavation sampling of the areas for extractable mercury content. Sybron Arden complied with the request. Post-excavation sampling of the west wall and floor of the pit revealed residual mercury levels were within 10 times Interim Primary Drinking Water Standards. On June 9, 1987 the NC Solid and Hazardous Waste Management Branch transmitted a letter to Sybron Arden stating that the Branch felt cleanup activities at the site were complete.

There are no records or indications that there have been other disposals at the site. There are records in the file, however, indicating that there was a spill on the site. The spill was noticed during a RCRA compliance inspection at the site on July 28, 1983. Samples of a liquid that was discovered on the ground near the hazardous waste storage area were collected and sampled by the NC Laboratory of Public Health. Laboratory analysis revealed high levels of chromium and lead in the waste sample. According to NC Solid and Hazardous Waste Management Branch files the spill was properly cleaned.

Sybron Arden is listed as a Generator under RCRA. The company generates mainly organic waste which includes: methylene chloride, 1,1,1-trichloroethane, lacquer thinner, acetone, xylene, and isopropanol. Waste mercury is also generated at the facility. All hazardous waste is transmitted off site for disposal at Groce Laboratories, Inc. in Greer, SC. There are two underground fuel tanks on the site each with a 20,000 holding capacity. There are no operable wells on the site. The company uses city water and sewage service. In July of 1987, Sybron Arden sold the facility and the Taylor TCA thermometer division to Day International in Waynesville, NC. Day International is now considered the responsible party for the facility.

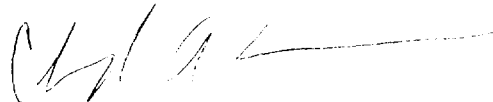
Because the soil from the pit in which the residual mercury disposal occurred has been excavated, and mercury levels are now below EP Toxicity levels in the pit, a low priority for inspection is assigned to this site. Future sampling at the site, if any, should include soil sampling around the hazardous waste storage area to determine if there may have been additional spills in this area.

Mr. Scott Gardner
9 December 1987
Page 3

On November 24, 1987, this Preliminary Assessment was reviewed by Jerry Rhodes, Assistant Branch Head, Solid and Hazardous Waste Management Branch, NC Department of Human Resources; by CERCLA Unit personnel; and by the following representatives from the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management: Fay Sweat, Groundwater Section; Glenn Ross, Air Quality Section; and Howard Bryant, Water Quality Section.

If you have any questions, please call me at (919) 733-2801.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Cheryl A. McMorris', with a long horizontal flourish extending to the right.

Cheryl A. McMorris, Environmental Chemist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

CAM/pb/0479b.74

NARRATIVE SUMMARY
SYBRON ARDEN
NCD002221703

The Sybron Arden site is a 90 acre site located in Arden, North Carolina, in Buncombe County. The company built the facility in 1964 and began operations that same year. The property was vacant farmland prior to Sybron Arden.

Sybron Arden manufactures medical and scientific instruments, which includes; thermometers, hydrometers, wind scopes, stethoscopes, blood pressure guages and cups, and dental chairs. Taylor TCA, a division of Sybron which is also located at the same facility manufactures thermometers. In June of 1971 Taylor TCA disposed of approximately 14 drumloads of crushed thermometers containing residual mercury on the site. The contents of the drums were emptied into a pit with dimensions of 6'x 6'x 3.5'. The disposal was a one time occurrence, and was discovered through a reference in a 1971 notebook maintained by a plant employee. Test were conducted on soil samples from the disposal area and confirmed the presence of glass and mercury in the soil. On December 12, 1986, the company filed a 103 (c) notification for the on-site hazardous waste disposal area with the NC Solid and Hazardous Waste Management Branch. The company decided to do a voluntary cleanup of the pit, under the guidance of the Branch.

Waste that had been disposed of in the pit was removed along with soil from the pit. The pit was excavated from its original size of 6'x 6'x3.5' to 12'x 8'x 6' in an attempt to remove mercury that may have leached into the soils. The soil and waste removed from the pit were manifested to Emelle, Alabama for disposal. Post excavation samples were collected from the pit, after the waste removal. Sybron split samples with the NC Solid and Hazardous Waste Management Branch. Laboratory analyses indicated mercury contamination in excess of .002 ppm in a sample collected from the floor of the pit and two from the west walls of the pit. The NC Solid and Hazardous Waste Management Branch recommended additional removal of soil from the west wall and floor areas of the pit, and subsequent post-excavation sampling of the areas for extractable mercury content. Sybron Arden complied with the request. Post-excavation sampling of the west wall and floor of the pit revealed residual mercury levels were within 10 times Interim Primary Drinking Water Standards. On June 9, 1987 the NC Solid and Hazardous Waste Management Branch transmitted a letter to Sybron Arden stating that the Branch felt cleanup activities at the site were complete.

There are no records or indications that there have been other disposals at the site. There are records in the file, however, indicating that there was a spill on the site. The spill was noticed during a RCRA compliance inspection at the site on July 28, 1983. Samples of a liquid that was discovered on the ground near the hazardous waste storage area were collected and sampled by the NC Laboratory of Public Health. Laboratory analysis revealed high levels of chromium and lead in the waste sample. According to NC Solid and Hazardous Waste Management Branch files the spill was properly cleaned.

Sybron Arden is listed as a Generator under RCRA. The company generates mainly organic waste which includes: methylene chloride, 1,1,1-trichloroethane, lacquer thinner, acetone, xylene, and isopropanol. Waste mercury is also generated at the facility. All hazardous waste is transmitted off site for disposal at Groce Laboratories, Inc. in Greer, SC. There are two underground fuel tanks on the site each with a 20,000 holding capacity. There are no operable wells on the site. The company uses city water and sewage service. In July of 1987, Sybron Arden sold the facility and the Taylor TCA thermometer division to Day International in Waynesville, NC. Day International is now considered the responsible party for the facility.

Because the soil from the pit in which the residual mercury disposal occurred has been excavated, and mercury levels are now below EP Toxicity levels in the pit, a low priority for inspection is assigned to this site. Future sampling at the site, if any, should include soil sampling around the hazardous waste storage area to determine if there may have been additional spills in this area.

CM/ds/0479b/9-10

Frady Mtn.

Busbee

Busbee Mtn.

Merrill

SKYLAND QUADRANGLE

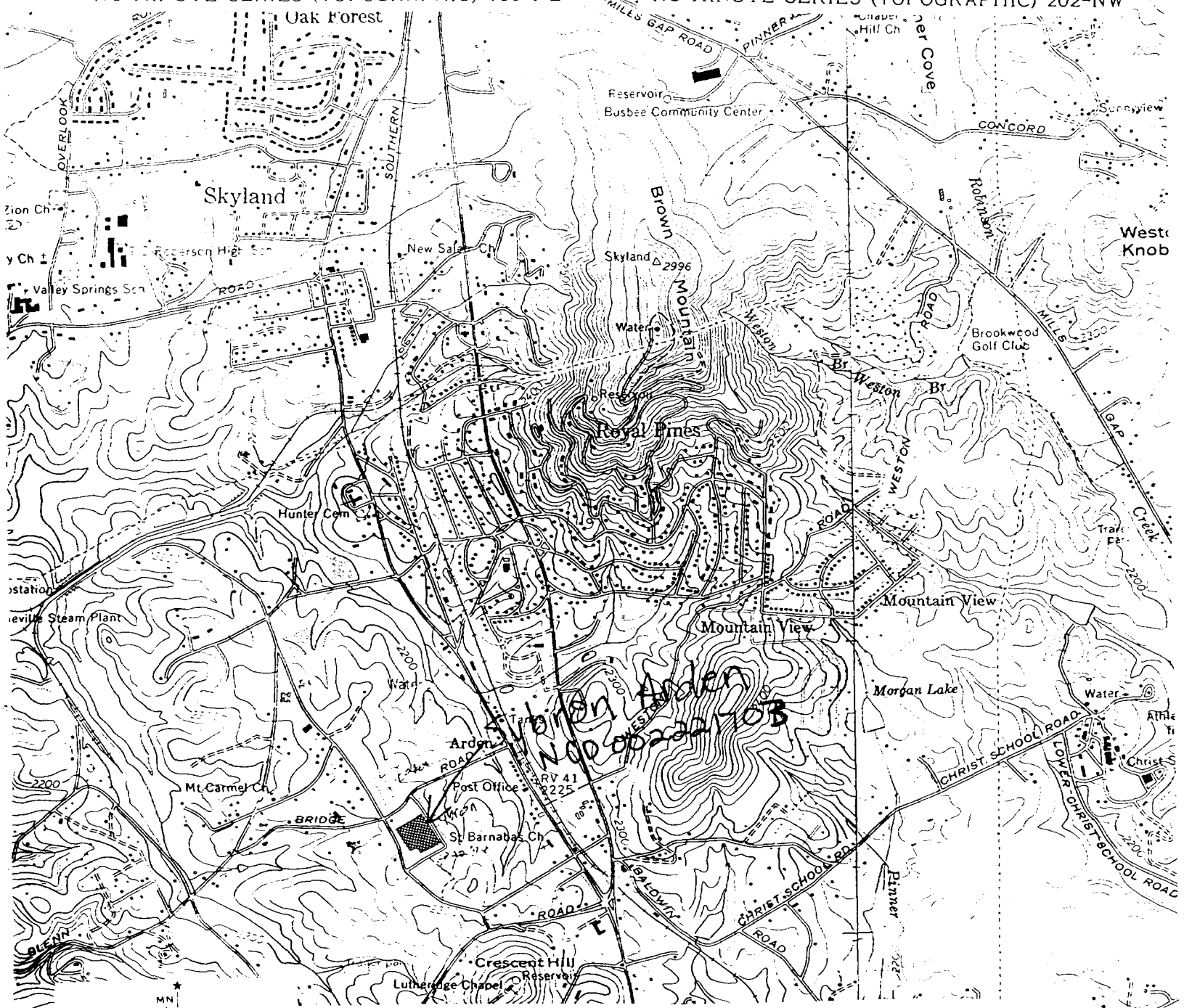
NORTH CAROLINA

7.5 MINUTE SERIES (TOPOGRAPHIC) 193-NE

FRUITLAND QUADRANGLE

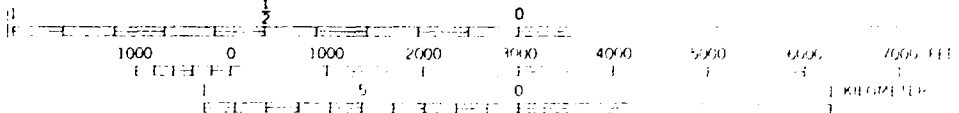
NORTH CAROLINA

7.5 MINUTE SERIES (TOPOGRAPHIC) 202-NW



SCALE 1:24,000

26° 44' 0" N
44 MILES
0° 54' 16" E
16 MILES



CONTOUR INTERVAL 20 FEET

DASHED LINES REPRESENT HALF-INTERVAL CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Oak Park
WATSON ROAD
ROAD CLASSIFICATION

Heavy-duty	Medium-duty	Light-duty	Poor motor road	Wagon and jeep track	Foot trail
Interstate Route	U. S. Route	State Route			

In developed areas, only through roads are classified

SKYLAND, N.C.

N3522.5-W8230/7.5

1965

PHOTO REPRODUCED FOR
AMS 4454 I NE SERIES V842

FRUITLAND, N.C.

N3522.5-W8222.5/7.5

1965

AMS 4654 IV NW SERIES V842

BM 100

PRELIMINARY HRS WITH PA

Facility name: <u>Sybron Arden Plant</u>	
Location: <u>95 Glen Bridge Road. Arden, N.C. 29704</u>	
EPA Region: <u>IV</u>	
Person(s) in charge of the facility: <u>Day International</u>	
<u>PO Box 360</u>	
<u>Waybesville, N.C. 28786</u>	
Name of Reviewer: <u>Cheryl A. McMorris</u>	Date: <u>14 December 1987</u>
General description of the facility: (For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)	
<p><u>In June of 1971, Taylor TCA, a division of Sybron Arden disposed of</u></p> <p><u>approximately 14 drum loads of crushed thermometers containing residual</u></p> <p><u>mercury in a pit on the site. The original dimensions of the pit was</u></p> <p><u>approximately 6'x6'x3.5'. The pit was excavated to 12'x8'x6' in an</u></p> <p><u>attempt to remove all mercury that had leached into the soil of the pit.</u></p> <p><u>Soil samples collected after additional excavation revealed mercury levels</u></p> <p><u>below EP Toxicity. This site was scored based on the 1971 mercury</u></p> <p><u>Disposal, the PHRS score of 26.92 is the score for the site prior to clean-up</u></p>	
<p>Scores: $S_M =$ ($S_{gw} =$ $S_{sw} =$ $S_a =$) activities.</p> <p>$S_M = 26.92$ $S_{gw} = 46.53$ $S_{sw} = 1.77$ $S_a = 0$</p> <p>$S_{FE} =$ Not scored</p> <p>$S_{DC} =$ Not scored</p>	

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	<u>0</u> 45	1	0	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 <u>3</u>	2	6	6	7 to 12 feet saprolite liquid mercury	
Net Precipitation	0 1 <u>2</u> 3	1	2	3		
Permeability of the Unsaturated Zone	0 1 <u>2</u> 3	1	2	3		
Physical State	0 1 2 <u>3</u>	1	3	3		
Total Route Characteristics Score			13	15		
3 Containment	0 1 2 <u>3</u>	1	3	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 <u>18</u>	1	18	18	Mercury 14 drums	
Hazardous Waste Quantity	0 <u>1</u> 2 3 4 5 6 7 8	1	1	8		
Total Waste Characteristics Score			19	26		
5 Targets					3.5	
Ground Water Use	0 1 <u>2</u> 3	3	6	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 <u>30</u> 32 35 40	1	30	40		
Total Targets Score			36	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			26676	57,330		
7 Divide line 6 by 57,330 and multiply by 100			S _{gw} = 46.53			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	(0) 45	1	0	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	Terrain slope = 2.86	
1-yr. 24-hr. Rainfall	0 1 2 (3)	1	3	3	3.5 inches	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	~1400 ft.	
Physical State	0 1 2 (3)	1	3	3	liquid mercury	
Total Route Characteristics Score			10	15		
3 Containment	0 (1) 2 3	1	1	3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	Mercury	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	14 drums	
Total Waste Characteristics Score			19	26		
5 Targets					4.5	
Surface Water Use	0 1 (2) 3	3	6	9		
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6		
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
Total Targets Score			6	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1140	64,350		
7 Divide line 6 by 64,350 and multiply by 100			$S_{sw} = 1.77$			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	<u>0</u> 45	1	0	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
4 Multiply 1 x 2 x 3				35,100		
5 Divide line 4 by 35,100 and multiply by 100			$S_a =$			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S ²
Groundwater Route Score (S _{gw})	46.53	2165
Surface Water Route Score (S _{sw})	1.77	3.13
Air Route Score (S _a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2168.13
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		46.56
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		26.92

FIGURE 10
WORKSHEET FOR COMPUTING S_M



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Sybron Arden		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 95 Glen Bridge Road			
03 CITY Arden	04 STATE NC	05 ZIP CODE 29704	06 COUNTY Buncombe	07 COUNTY CODE 11	08 CONG DIST 11
09 COORDINATES LATITUDE 35° 27' 45"		LONGITUDE 082° 31' 16"			

10 DIRECTIONS TO SITE (Starting from nearest public road)
From Raleigh, take 40 W. to Durham. In Durham take 85 S. to Greensboro. In Greensboro take 40 W. to Asheville. Stay on 40 W. until it intersects with HWY. 26. Take the HWY. 26 S. exit at the Asheville airport. Turn left onto unnamed road. Go straight to

III. RESPONSIBLE PARTIES Glen Bridge road. Turn right onto Glen Bridge Rd. Site is on the right.

01 OWNER (If known) Day International		02 STREET (Business, mailing, residential) PO Box 360			
03 CITY Waynesville	04 STATE NC	05 ZIP CODE 28786	06 TELEPHONE NUMBER (704) 456-5623		
07 OPERATOR (If known and different from owner) Day International		08 STREET (Business, mailing, residential) 95 Glen Bridge Road			
09 CITY Arden	10 STATE NC	11 ZIP CODE 29704	12 TELEPHONE NUMBER (704) 684-5178		

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER-OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: ____/____/____ MONTH DAY YEAR ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 12/12/86 MONTH DAY YEAR ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input type="checkbox"/> YES DATE ____/____/____ MONTH DAY YEAR <input checked="" type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____	
--	--	---	--

02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	03 YEARS OF OPERATION 1964 BEGINNING YEAR presently operating ENDING YEAR <input type="checkbox"/> UNKNOWN
--	---

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
In June of 1971, Taylor TCA, a division of Sybron Arden disposed of approximately 14 drum loads of crushed thermometers containing residual mercury in a pit on the site. The original dimensions of the pit was approx. 6'x6'x3.5'. The pit was excavated to 12'x8'x6' in an attempt to remove all mercury that may have leached into the soils of

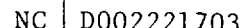
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
the pit. Soil samples collected after additional excavation revealed mercury levels below EP Toxicity. In 1983 waste oil was noticed on the site near the hazardous waste storage area. Samples collected indicated the oil was high in chromium and lead. This area was cleaned by company personnel. Two

V. PRIORITY ASSESSMENT underground 20,000 gal. fuel oil tanks on the site. City water & sewage service.

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (inspection required promptly) ☐ B. MEDIUM (inspection required) ☒ C. LOW (inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Robert Boyd	02 OF (Agency Organization) Schwitzer Corporation	03 TELEPHONE NUMBER (704) 684-4000
04 PERSON RESPONSIBLE FOR ASSESSMENT Cheryl A. McMorris	05 AGENCY DHR/DHS	06 ORGANIZATION SHW Mgmt. Br.
	07 TELEPHONE NUMBER (919) 733-2801	08 DATE 10/06/87 MONTH DAY YEAR



<input checked="" type="checkbox"/> A TOXIC	<input type="checkbox"/> E SOLUBLE	<input type="checkbox"/> I HIGHLY VOLATILE
<input type="checkbox"/> B CORROSIVE	<input type="checkbox"/> F INFECTIOUS	<input type="checkbox"/> J EXPLOSIVE
<input type="checkbox"/> C RADIOACTIVE	<input type="checkbox"/> G FLAMMABLE	<input type="checkbox"/> K REACTIVE
<input type="checkbox"/> D PERSISTENT	<input type="checkbox"/> H IGNITABLE	<input type="checkbox"/> L INCOMPATIBLE
		<input type="checkbox"/> M NOT APPLICABLE

EPA FORM 2070-12 (7-81)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION

Surface soil samples should be collected at the hazardous waste storage area to determine if additional spills occurred in the area.

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D002221705

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continue:)

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (include name(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
(Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state fees, sample analysis, reports)

SYBRON ARDEN PLANT
RCRA STATUS
NCD002221703

The Sybron Arden site has never been regulated under the Resource Conservation and Recovery Act of 1976 (RCRA).

REGION IV RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name Sybron Arden Plant
 City Arden State North Carolina
 Facility I.D. Number NC0002221703

Type of Facility: Generator X Transporter _____ TSD _____

I. RCRA APPLICABILITY

	yes	no
Does the facility have RCRA interim status?	_____	<u>X</u>
Does the facility have a final or post-closure permit? If so, date issued _____	_____	<u>X</u>
Is the facility a non-notifier that has been identified by States or EPA?	_____	<u>X</u>
Is the facility a known or possible protective filer?	_____	<u>X</u>
Have RCRA wastes been stored onsite for longer than 90 days since November 19, 1980?	_____	<u>X</u>
Have RCRA wastes been disposed onsite since November 19, 1980?	_____	<u>X</u>

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS

	yes	no
Is the facility owned by an entity that has filed for bankruptcy under federal laws (Chapter 7 or 11) or State laws?	_____	_____
If yes, what has it filed under?		
Chapter 7 _____ Chapter 11 _____ Other _____		

III. ENFORCEMENT

RCRA Status

yes

no

Has the facility lost authorization to operate via
LOIS, 3005(c) permit denial, 3008(h) IS termination,
3005(d) permit revocation?

Has the facilities interim status been terminated via
another mechanism (i.e. administrative termination)?

IV. CERCLA STATUS

What CERCLA financed remedial or removal activities have been initiated
at the site? (RI/FS, RD/RA, O&M, forward planning, and removal; does not
include enforcement or PA/SI activities).

V. Enforcement Status

yes

no

In general, would you characterize the facility as
demonstrating an unwillingness to undertake corrective
action based on prior State, CERCLA or RCRA actions?

If yes, please describe and cite the authorities exercised.

yes

no

Is the owner/operator a party to any enforcement action
at the site?

If not, why not?

Are any PRPs (including owner/operators) undertaking remedial studies or
action in response to CERCLA enforcement authorities? What is the extent/
type of work that has been completed (RI/FS, etc.) and who (generators,
owner/operator, etc.) is conducting the work?

18 December 1986

TO: Lee Crosby

FROM: Cheryl McMorris CAM

RE: Sybron Arden Plant

I spoke with Keith Masters regarding the Sybron Arden Plant. He informed me that the plant is located in Arden, NC on Glenbridge Road. The plant manufactures thermometers and is currently classified as a generator under RCRA. Mr. Masters conducted a walk-thru inspection at the plant on December 8, 1986. He asked Mr. Robert Boyd, Safety and Environmental Supervisor at the facility, about any past waste disposals on the site. Mr. Boyd told him that in 1971 approximately 14, 55-gallon drum loads of crushed glass and mercury were disposed of on the site. The contents of the drums were deposited in a pit with the dimensions 6' x 6' x 2.5', located in front of the plant. The pit has since been covered with a cement walkway. Recently the soil in the area around the walkway and an area drilled through the center of the walkway was sampled by Sybron Arden personnel. They found contamination had not migrated outside of the pit area. However, they did find contamination in the soil taken from the center of the pit.

Currently, Sybron Arden is designing a site clean-up plan, with the intentions of submitting the proposed plan to Bill Meyer this week. All waste that is generated on the site is now shipped to Groce Labs in Greer, SC.

There is one well on site, however it is not used by the plant anymore. The facility is now connected to city water distribution lines.

CM/pb/0520b.27

7 October 1987

To: File

From: Cheryl A. McMorris CAM

Re: Telephone conversation with Walter Proslt of Taylor TCA
(704) 684-5178

I spoke with Mr. Walter Proslt, Facilities Engineer for Taylor TCA, a division of Sybron Arden. Mr. Proslt informed me that Sybron has been purchased by Day International which used to be Dayco Rubber Company. Sybron Arden no longer exists, and the responsible party for any contamination that might exist at the site would be Day International. The address for Day International is P. O. Box 360, Waynesville, NC 28786. The telephone number is (704) 456-5623. The contact person at Day International for future remedial work is Mr. Edward Dzierzynski of the Waynesville address.

CM/ds/0479b.49

2 October 1987

To: File

From: Cheryl A. McMorris *CAW*

Subject: Telephone conversation with Robert Boyd, Schwitzer Corporation
(704) 684-4000

I spoke with Mr. Boyd, the former Safety and Environmental Programs Officer for the Sybron Arden facility which is located in Arden, North Carolina. Mr. Boyd, who is no longer employed by Sybron Arden informed me that the company sold the building and parking lot to a Division of Dayco Rubber Company in June 1987.

The Sybron Arden facility was built by the company in 1964. Prior to that time, the 90 acre site was vacant farmland. Sybron Arden manufactures medical and scientific instruments; their finished products includes thermometers, hydrometers, wind scopes, stethoscopes, blood pressure gauges and cups, and dental chairs. In June of 1971 the company disposed of approximately 14 drum loads of crushed thermometers which contained mercury. The contents of the drums were emptied into a pit on the site with dimensions of 6'x 6'x 3.5'. Taylor Instruments, a division of Sybron which is also located at the facility, was responsible for the disposal. On December 12, 1986, the company filed a 103 (c) notification of the hazardous waste disposal with the NC Solid and Hazardous Waste Management Branch. In January of 1987 the company removed the cement sidewalk that covered the pit and removed the crushed thermometers and residual mercury from the pit. Soil from inside the pit was removed and manifested along with the waste from the pit to Groce Laboratories, Inc. in Greer, SC for disposal. Soil samples were collected from the pit and analyzed for mercury content. Laboratory soil samples were below EP toxicity for mercury. The pit has since been filled in with fill dirt and the sidewalk and landscape replaced.

According to Mr. Boyd there have been no other disposals or spills on the site. All hazardous waste generated on the site is manifested to Groce Laboratories, Inc. for disposal. The company is listed as a generator under RCRA. There is only one well on the site. This well is inoperable, and has been filled in with bricks and dirt. The company uses city water and sewage service. There are two underground tanks on the site. The tanks are used for the storage of fuel oil and each has a 20,000 gallon capacity.

CM/ds/0479b.8

To: Lee Chesley - Doug Holyfield
From: Keith Masters
Subject Sybron Anden Plant

Please be advised that on 12-8-86
this company informed me that in
1971 they had disposed of approx 14
kum of crushed glass and mercury
in a pit approx 6'x6'x3½'
located under a concrete walk-way
on their property.

They have prepared a clean
up plan and say they intend
to submit it to Bill Mayer the
2nd or 3rd week in Dec. 1986.

Please contact me if you need
more information or if further action
by me is needed.

Sybron Anden Plant
Coker Bridge Rd., Anden, N.C.
NCD 002221703
Robert Boyd, Facility Contact.

Tycos

December 12, 1986

SYBRON

Director, Waste Management Division
Environmental Protection Agency, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Gentlemen:

We have recently discovered the existence of a small waste burial site that may be subject to the notification requirements under Section 103(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980. As you know, there is substantial disagreement in the legal community concerning the need to file a Section 103(c) notification for facilities discovered after June 9, 1981. We are filing this notification to inform you of our recent discovery and to assure you that we are acting promptly to address the situation.

The attached notification form (Form 8900-1, 46 Fed. Reg. 22144), describes the site. The area involved is approximately 6'X6'X4' and contains scrap glass containing some metallic mercury from a thermometer manufacturing operation. The soil tests taken in and around the site indicate that the mercury has not migrated. There has been no exposure to people or the environment, since the site is located in a heavy clay soil and has been covered by a concrete sidewalk.

Officials of the North Carolina Solid and Hazardous Waste Management Branch have been made aware of this site. We have also retained Ecoflo, Inc., of Greensboro, North Carolina to design and conduct an appropriate remedial program for the site.

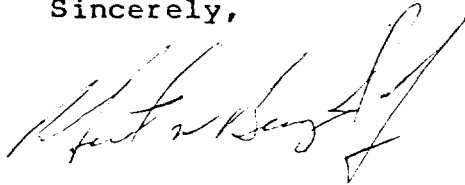
On December 18, 1986, I am meeting with Mr. Jerry Rhodes and Ms. Lee Crosby of the North Carolina Solid and Hazardous Waste Management Branch, to present our remedial plans for the site.

Please let me know if you have any questions as to the program which has been undertaken.

Director, Waste Management Division
December 12, 1986
Page Two

I am, by copy of this letter, formally providing Mr. William L. Meyer and Ms. Lee Crosby, of North Carolina's Solid and Hazardous Waste Branch, with a notification of this site.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert L. Berry". The signature is written in dark ink and is positioned below the word "Sincerely,".

EPA Notification of Hazardous Waste Site

United States
Environmental Protection
Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name TYCOS LIFE SCIENCE DIVISION OF SYBRON CORP.

Street 95 GLENN BRIDGE ROAD

City ARDEN

State N.C. Zip Code 29704

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site SAME AS ABOVE

Street

City

County BUNCOMBE State

Zip Code

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title) BOYD, Jr., ROBERT W.

SUPERVISOR SAFETY AND ENVIRONMENTAL PROGRAMS

Phone (704) 684-8111 Ext 401

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year) JUNE 4, 1971 To (Year) (ONE TIME)

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:

Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☒ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:

Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☒ Other (Specify)

INSTRUMENT MFG.

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:

EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

U151

Notification of Hazardous Waste Site

Side Two

F Waste Quantity Place an X in the appropriate boxes to indicate the facility types found at the site. In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons. In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.	Facility Type 1. <input type="checkbox"/> Piles 2. <input type="checkbox"/> Land Treatment 3. <input checked="" type="checkbox"/> Landfill 4. <input type="checkbox"/> Tanks 5. <input type="checkbox"/> Impoundment 6. <input type="checkbox"/> Underground Injection 7. <input type="checkbox"/> Drums, Above Ground 8. <input type="checkbox"/> Drums, Below Ground 9. <input type="checkbox"/> Other (Specify) _____	Total Facility Waste Amount cubic feet <u>approx 100 CU.FT</u> gallons _____ Total Facility Area square feet <u>APPROX 36 SQ.FT</u> acres _____
---	--	--

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items Hand I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

One-Time landburial in June 1971 of scrap glass containing mercury at a plant manufacturing thermometers and other instruments. This site was discovered recently through a reference in a 1971 notebook maintained by a plant employee. Tests conducted on soil samples from the suspect area have now confirmed the presence of glass and mercury, but also indicated that the material is contained within a small area and has not migrated or leached significantly. North Carolina State authorities are being notified, and a voluntary cleanup will be conducted by Tycoos.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name Robert W. Boyd Jr.

Street 95 Glenn Bridge Road

City Arden

State N.C. Zip Code 28704

Signature [Signature]

Date 7-2-81

☒ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other



*Specialists in
chemical and environmental
management*

P.O. Box 10383
Greensboro, North Carolina 27404
(919) 855-7925

Site Plan
for the
Excavation of Soils
Containing with Mercury

Sybron
Glenn Bridge Road
Arden, NC 28704
(704) 684-8111

Prepared by:
Joe Gunn
Senior Account Manager

Sybron, Arden, North Carolina, EPA Identification Number NCD002221703, has contracted ECOFLO of Greensboro, North Carolina, EPA Identification Number NCD980842132, for the cleanup, transportation, and disposal of soils containing Mercury. All work will be done in accordance with all Federal, State, EPA, and DOT regulations.

TIME TABLE

Submission of Samples for Disposal Approval	December 5, 1986
Submission of Site Plan to Sybron	December 8, 1986
Discussion with Solid and Hazardous Waste Branch	December 12, 1986 thru December 19, 1986
Excavation of Site, Sampling of area removed	December 22, 1986 thru December 31, 1986
Testing of Soil Samples	December 31, 1986 thru January 12, 1987
Closure of Site	January 12, 1987 thru January 16, 1987
Shipment of Waste Material	January 26, 1987 thru January 31, 1987

CONTRACTORS/EQUIPMENT

ECOFLO, INC. NCD980842132
P.O. Box 10383 2750 Patterson Street
Greensboro, NC 27404 Greensboro, NC 27407
(919) 855-7925
Contact: Joe Gunn, Mike Kelly

Bumcombe Construction Company
P.O. Box 5394 Meadow Road
Asheville, NC 28803 Biltmore, NC
(704) 274-4909 Backhoe/Loader Service

First Piedmont Corporation VAD055043020
P.O. Drawer 1069
Chatam, VA 24531
(804) 432-0211
Contact: Tommy Stump Roll-Off Container/Transportation

Chemical Waste Management ALD000622464
Highway 17, Mile Marker 163
P.O. Box 55
Emelle, AL 35459
Contact: Frank Houck Disposal Vendor
(704) 357-3413

J. L. Rogers & Calcott Engineers, Inc.
718 Lowndes Hill Road
Greenville, SC 29607
(803)232-1556

Soil & Materials Engineers, Inc.
349 East Blackstock Road
Spartanburg, SC 29301
Contact: Louis Mahiquez
(803) 574-2360

I. Securing Waste Approvals

Samples of the Mercury laden soils will be profiled and qualified for disposal by the Waste Acceptance Department. Once a disposal site is selected, these samples, along with Waste Characterization Forms, are to be sent to the designated facility for approvals. Material of this type will be put into a secure chemical-landfills.

II. Site Preparation

The waste material is located underneath a sidewalk, and a portion of a parking lot (see diagram A). This area will be blocked off from parking, and the sidewalk diverted around the area to be excavated. A gravel walkway will be sufficient. The area will be marked off with stakes and ribbon to prevent accidents, while the area is being removed. A thick film of Polyethylene (6 mil) will be applied around the site to avoid spillage, while removing and loading of the material. Should weather hamper operations, the area excavated will be covered with Polyethylene to avoid run-off contamination.

A dike of 6 inches to 10 inches in height will be constructed around the perimeter of the hole to contain run-off water from the plastic hole cover. This water will be collected and placed in the Sybron facility waste-water treatment plant. The dike materials will be placed in the bulk roll-off for disposal.

A roll-off container of 20-yard capacity will be placed adjacent to the excavation site for loading of the waste material. A cover will be supplied to avoid rain water from entering the roll-off container.

ECOFLO's Project Manager will supervise the site preparation prior to the actual removal of contaminated soils.

III. Site Excavation

A private contractor (Buncombe Construction Company) has agreed to furnish a rubber-tire front-end loader with a backhoe for the removal of the soils. The operator will be supervised by ECOFLO's Project Manager to insure proper removal and no contamination of other areas around the site.

The concrete sidewalks will be removed and placed in the roll-off container. That portion of the parking lot, requiring removal, will also be placed in the roll-off container.

The area containing crushed glass and Metallic Mercury residue, is 6'x6'x3.5' deep. Excavation, based on the core samples (see attachment B) will be 12'x8'x6' deep. This material will be loaded directly into the roll-off container and covered. All loose material unable to be removed by the backhoe operator will be removed with a shovel by ECOFLO'S Project Manager with assistance of the front-end loader.

IV. Site Sampling/Testing

Samples will be taken from the area excavated as listed below to insure that sufficient material has been removed.

2 end walls 18 samples

0 - 1.5' deep
1.5 - 3.0' deep
3.0 - 4.0' deep

8'

.	.	.	4'
.	.	.	
.	.	.	

2 side walls 18 samples

0 - 1.5' deep
1.5 - 3.0' deep
3.0 - 4.0' deep

12'

.	.	.	4'
.	.	.	
.	.	.	

Bottom Floor 11 Samples

0 - 6" deep
12 - 24" deep
(middle, corner)

12'

.	.	.	8'
.	.	.	
.	.	.	

Sampling will be done by Soil and Material Engineers, Inc., with the assistance of ECOFLO's Project Manager.

Testing for Mercury will be done according to EP Toxicity Procedures as set forth in the EPA regulations. The tests will be performed by J. L. Rogers & Callcott Engineers, Inc., in Greenville, South Carolina. All original samples were tested by this firm. The level of Mercury contamination will be tested for readings in mg/l. All tested samples should be less than .2 mg/l, which is the limit set by EPA.

V. Securing Site

Once excavation and sampling has been completed, the area removed will be covered with Polyethylene to prevent filling with rainwater. The loading equipment will be decontaminated to avoid contamination of other areas or off-site locations. All plastic gloves, miscellaneous tools, and equipment will be discarded into the disposal container. A tarp will be placed over the roll-off container to secure it from rainfall and other foreign matter. The stakes and ribbon around the site area will remain to avoid accidents around the excavated hole. The temporary sidewalk will be used until the site is closed.

The site will be inspected daily by either company personnel or security guard.

VI. Closing Site

The lab reports will determine if all soils containing Mercury greater than .2 mg/l have been removed.

When all Mercury levels after lab testing are below .2 mg/l, a compactible soil (clay based) will be backfilled and tamped. Sidewalks and parking lot will be replaced by Sybron.

The roll-off container will be manifested to the disposal site when final approvals have been received by ECOFLO. A chemist will be on site to insure proper manifesting and pickup of the roll-off container.

COST ESTIMATE

Waste Approvals	\$ 350.00
Prep Site; Deliver Roll Off	\$ 1,800.00
Labor (Project Manager)	\$ 800.00
Time/Materials On-Site	\$ 1,200.00
Transportation of Waste	\$ 3,800.00
Disposal of Waste	\$ 4,000.00
Lab Tests	\$ 1,500.00
Sub-Contractor (Backhoe)	\$ 2,000.00
Roll-Off Container (Rental)	<u>\$ 490.00</u>
	\$15,940.00

Estimate based on 20-cubic yards of waste material to be removed.
Final costs will be relevant to actual area contaminated and amount
of waste removed for disposal.

J. L. ROGERS & CALLCOTT ENGINEERS, INC.

718 Lowndes Hill Road - Greenville, South Carolina 29607 - (803) 232-1556

J.L. Rogers, P.E.
F.D. Callcott, P.E.

Diplomate, American Academy of Environmental Engineers

CLIENT: Ritter-Tyco/Div. of Sybron Corporation
Arden, N.C.

DATE RECEIVED: 01/06/1987

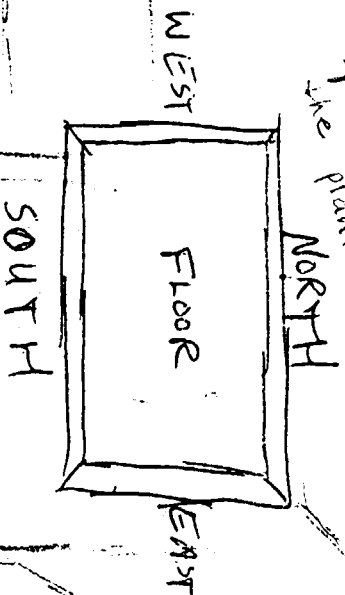
DATE REPORTED: 01/26/1987

<u>SAMPLE NO.</u>	<u>SAMPLE DESCRIPTION</u>	<u>MERCURY, mg/kg</u>
43993	Background Composite	.17
43994	E1A	.02
43995	E1B	.05
43996	E1C	.11
43997	E2A	.03
43998	E2B	.04
43999	E2C	.03
44000	E3A	.13
44001	E3B	.15
44002	E3C	.02
44003	F1A	.01
44004	F1B	.01
44005	F1C	.04
44006	F2A	.88
44007	F2B	1.08
44008	F2C	.12
44009	F3A	.29
44010	F3B	.02
44011	F3C	.62
44012	N1A	.01
44013	N1B	.005
44014	N1C	.05
44015	N2A	.03
44016	N2B	.05
44017	N2C	.05
44018	N3A	.07
44019	N3B	.28
44020	N3C	.07
44021	S1A	.01
44022	S1B	.07
44023	S1C	.25
44024	S2A	.01
44025	S2B	.02
44026	S2C	.01
44027	S3A	.07
44028	S3B	.01
44029	S3C	.01
44030	W1A	.03
44031	W1B	.07
44032	W1C	.91
44033	W2A	1.10
44034	W2B	.55
44035	W2C	.20
44036	W3A	.11
44037	W3B	.03
44038	W3C	.02

REPORTED BY: Sam W. Avery
Sam W. Avery, Laboratory Manager

SYBRON

Background is compact Reception
sample taken from
specific locations around Area
the plant.



1. Was the sample from ground
surface or pit? yes
2. When?
3. Where was it taken?
4. Are you now sampling
to determine the extent
of soil contamination -
any?
5. When will the lab analysis
for the sample you
had analyzed be complete?
6. results
1. yes
2. 1/6/87
3. IN storage facility now.
4. 3 COH of CONTAMINATED
oil water pt. of e to
final Alabama today. bring
empty bech + pick up
4. yes

Slab in Greenhouse samples are
taken there. Should be taken today
or tomorrow

(Top)

W1A	W1B	W1C
W2A	W2B	W2C
W3A	W3B	W3C

(Floor)

East Wall Cut-out
Samples labeled

Direction
(A, B, C) - Row
(1, 2, 3) - Column

West 10 1/2'

North 9 1/2'

F1A	F1B	F1C
F2A	F2B	F2C
F3A	F3B	F3C

East 10 1/2'

Floor cut-out

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ☒ Generator ☐ Transporter ☐ Treatment Facility
☐ Storage Facility ☐ Disposal Facility ☐ Landfill
☐ Other: _____

Company's Name Sybron Arden Plant Telephone (704) 684-8111

Address 95 Glenn Bridge Road. Arden, N.C. 29704

*Collector's Name Sybron Arden Personnel Telephone (704) 684-8111
signature

Date Sampled 12-30-86 Time Sampled unknown

Type of Process Generating Waste Manufacture of thermometers

Field Information

In 1971 company disposed of approximately 14 drums
of crushed glass & mercury in an on-site pit

Field Sample No. 003787 ⁰⁰³⁸³³ ~~003829~~ _____

Chain of Possession:

1.	<u>[Signature]</u> signature	<u>Chemist</u> title	<u>11/6/87-11/19/87</u> inclusive dates
2.	<u>[Signature]</u> signature	<u>Lab Tech</u> title	<u>19 Jan 87</u> inclusive dates
3.	_____ signature	_____ title	_____ inclusive dates

Results reported

<u>[Signature]</u> signature	<u>Lab Tech</u> title	<u>30 Jan 87</u> date
---------------------------------	--------------------------	--------------------------

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.

* Sub lab results to: Cheryl McMorris
CEACLA Unit, SHW Mgmt. Br.

SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Site Number 110 TBA Field Sample Number 003787
Name of Site Sybron Arden Plant Site Location Arden, N.C.
Collected By Sybron Arden Personnel ID# 47 Date Collected 12-30-86 Time _____
Type of Sample: submit lab analyses results to: Cheryl McMorris
CEAELA Unit, SHW mgmt.

Environmental

Concentrate

____ Groundwater (1) _____ Solid (5)
____ Surface Water (2) _____ Liquid (6)
☒ Soil (3) _____ Sludge (7)
____ Other (4) _____ Other (8)

Background Samp (12/30/86)

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
____ Arsenic	_____	____ Arsenic	_____	____ Silver	_____
____ Barium	_____	____ Barium	_____	____ Sulfates	_____
____ Cadmium	_____	____ Cadmium	_____	____ Zinc	_____
____ Chromium	_____	____ Chloride	_____	____ Ph	_____
____ Lead	_____	____ Chromium	_____	____ Conductivity	_____
<input checked="" type="checkbox"/> Mercury	<u><0.02</u>	____ Copper	_____	____ TDS	_____
____ Selenium	_____	____ Fluoride	_____	____ TOC	_____
____ Silver	_____	____ Iron	_____		
		____ Lead	_____		
		____ Manganese	_____		
		<input checked="" type="checkbox"/> Mercury	<u>0.25</u>		
		____ Nitrate	_____		
		____ Selenium	_____		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
____ P&T:GC/MS	_____	____ EDB	_____	____ Methoxychlor	_____
____ Acid:B/N Ext.	_____	____ PCB's	_____	____ Toxaphene	_____
____ TOX	_____	____ Petroleum	_____	____ 2,4-D	_____
		____ Endrin	_____	____ 2,4,5-TP (silvex)	_____
		____ Lindane	_____		

MICROBIOLOGY

RADIOCHEMISTRY

Parameter	Parameter	Results PCi/1
____ (MF) Coliform Colonies/100mls	____ Gross Alpha	_____
____ (MPN) Coliform Colonies/100mls	____ Gross Beta	_____

Date Received _____ Date Reported 30 Jan 87
Date Extracted _____ Date Analyzed _____
Reported By _____ Lab Number 001287 JAN 19 87

SAMPLE ANALYSES REQUEST

Site Number 110 TBA Field Sample Number 003833
Name of Site Sybron Arden Plant Site Location Arden, N.C.
Collected By Sybron Arden Personnel ID# 47 Date Collected 12-30-86 Time _____
Type of Sample: Submit lab analysis results to: Cheryl McMorris
CERCLA Unit, SHW Mgmt. Br.

Environmental

Concentrate

____ Groundwater (1) ____ Solid (5)
____ Surface Water (2) ____ Liquid (6)
☒ Soil (3) ____ Sludge (7)
____ Other (4) ____ Other (8)

Sample # F2B

Comments

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
____ Arsenic	_____	____ Arsenic	_____	____ Silver	_____
____ Barium	_____	____ Barium	_____	____ Sulfates	_____
____ Cadmium	_____	____ Cadmium	_____	____ Zinc	_____
____ Chromium	_____	____ Chloride	_____	____ Ph	_____
____ Lead	_____	____ Chromium	_____	____ Conductivity	_____
<input checked="" type="checkbox"/> Mercury	<u><0.02</u>	____ Copper	_____	____ TDS	_____
____ Selenium	_____	____ Fluoride	_____	____ TOC	_____
____ Silver	_____	____ Iron	_____		
		____ Lead	_____		
		____ Manganese	_____		
		<input checked="" type="checkbox"/> Mercury	<u>0.8</u>		
		____ Nitrate	_____		
		____ Selenium	_____		

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
____ P&T:GC/MS	_____	____ EDB	_____	____ Methoxychlor	_____
____ Acid:B/N Ext.	_____	____ PCB's	_____	____ Toxaphene	_____
____ TOX	_____	____ Petroleum	_____	____ 2,4-D	_____
		____ Endrin	_____	____ 2,4,5-TP (silvex)	_____
		____ Lindane	_____		

MICROBIOLOGY

RADIOCHEMISTRY

Parameter	Parameter	Results PCi/l
____ (MF) Coliform Colonies/100mls	____ Gross Alpha	_____
____ (MPN) Coliform Colonies/100mls	____ Gross Beta	_____

Date Received _____ Date Reported 30 Jan 87
Date Extracted _____ Date Analyzed _____
Reported By _____ Lab Number 001288 JAN 19 87

received
SAMPLE ANALYSES REQUEST

CERCLA
State Laboratory of Public Health
P. O. Box 28047
336 N. Wilmington Street
Raleigh, 27611

Site Number 1107BA Field Sample Number 003529
Name of Site Sybron Arden Plant Site Location Arden, N.C.
Collected By Sybron Arden Personnel ID# 49 Date Collected 12-30-86 Time _____
Type of Sample: submit lab analyses results sent to Cheryl McMorris
CERCLA Unit, SHW Mgmt. Br.

Environmental

Concentrate

_____ Groundwater (1) _____ Solid (5)
_____ Surface Water (2) _____ Liquid (6)
X _____ Soil (3) _____ Sludge (7)
_____ Other (4) _____ Other (8)

Samp # F2B

Comments

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
_____ Arsenic	_____	_____ Arsenic	_____	_____ Silver	_____
_____ Barium	_____	_____ Barium	_____	_____ Sulfates	_____
_____ Cadmium	_____	_____ Cadmium	_____	_____ Zinc	_____
_____ Chromium	_____	_____ Chloride	_____	_____ Ph	_____
_____ Lead	_____	_____ Chromium	_____	_____ Conductivity	_____
_____ Mercury	_____	_____ Copper	_____	_____ TDS	_____
_____ Selenium	_____	_____ Fluoride	_____	_____ TOC	_____
_____ Silver	_____	_____ Iron	_____		
_____	_____	_____ Lead	_____		
_____	_____	_____ Manganese	_____		
_____	_____	_____ Mercury	_____		
_____	_____	_____ Nitrate	_____		
_____	_____	_____ Selenium	_____		

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
<u>X</u> P&T:GC/MS	_____	_____ EDB	_____	_____ Methoxychlor	_____
<u>X</u> Acid:B/N Ext.	_____	_____ PCB's	_____	_____ Toxaphene	_____
_____ TOX	_____	_____ Petroleum	_____	_____ 2,4-D	_____
_____	_____	_____ Endrin	_____	_____ 2,4,5-TP (silvex)	_____
_____	_____	_____ Lindane	_____		

MICROBIOLOGY

RADIOCHEMISTRY

Parameter	Parameter	Results PCi/1
_____ (MF) Coliform Colonies/100mls	_____ Gross Alpha	_____
_____ (MPN) Coliform Colonies/100mls	_____ Gross Beta	_____

Date Received 1-19-87 Date Reported 2/24/87
Date Extracted 1-29-87 Date Analyzed 1-29-87 PT 2-20-87 nw
Reported By John R. Neal Lab Number 700139

#700139

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH



Chain of Custody Record

Hazardous Waste Materials

Location of Sampling: ☒ Generator ☐ Transporter ☐ Treatment Facility
☐ Storage Facility ☐ Disposal Facility ☐ Landfill
☐ Other: _____

Company's Name Sybron Arden Plant Telephone (704) 684-8111

Address 95 Glenn Bridge Road. Arden, N.C. 29704

Collector's Name Sybron Arden Personnel Telephone (704) 684-8111
signature

Date Sampled 12-30-86 Time Sampled unknown

Type of Process Generating Waste Manufactures thermometers

Field Information

In 1971 company disposed of approximately 14 drums of crushed glass + mercury in an on-site pit.

Field Sample No. ~~103528~~ 103529

Chain of Possession:

1.	<u>[Signature]</u> signature	<u>Chemist</u> title	<u>1/16/87-1/19/87</u> inclusive dates
2.	<u>[Signature]</u> signature	<u>Chemist II</u> title	<u>1/19/87</u> inclusive dates
3.	_____ signature	_____ title	_____ inclusive dates

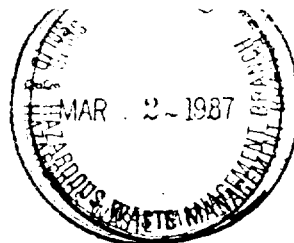
Results reported

_____ signature	_____ title	_____ date
--------------------	----------------	---------------

Instructions: Complete all applicable information including signatures, and submit with analysis request forms.

* Submit lab results to Cheryl McMorris
CEACLA Unit, SHW Mgmt. Br.

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

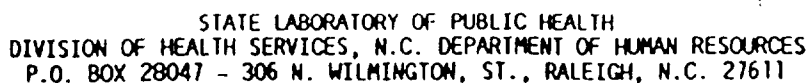


ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES COMPOUND	LAB NO	700139									
	FIELD #	3529									
	TYPE	(3)		()		()		()		()	
	UNITS	µg/l	µg/kg	µg/l	µg/kg	µg/l	µg/kg	µg/l	µg/kg	µg/l	µg/kg
N-nitrosodimethylamine	330	4									
bis(2-chloroethyl)ether											
2-chlorophenol											
phenol											
1,3-dichlorobenzene											
1,4-dichlorobenzene											
1,2-dichlorobenzene											
bis(2-chloroisopropyl)ether											
hexachloroethane											
N-nitroso-di-n-propylamine											
nitrobenzene											
isophorone											
2-nitrophenol											
2,4-dimethylphenol											
bis(2-chloroethoxy)methane											
2,4-dichlorophenol											
1,2,4-trichlorobenzene											
naphthalene											
hexachlorobutadiene											
4-chloro-m-cresol											
hexachlorocyclopentadiene											
2,4,6-trichlorophenol											
2-chloronaphthalene											
acenaphthylene											
dimethyl phthalate											
2,6-dinitrotoluene											
acenaphthene	✓										
2,4-dinitrophenol	1600										
2,4-dinitrotoluene	330										
4-nitrophenol	1600										
fluorene	330										
4-chlorophenylphenylether	330										
diethyl phthalate	330										
4,6-dinitro-o-cresol	1600										
diphenylamine	1600										
azobenzene	1600										
4-bromophenylphenylether	330										
hexachlorobenzene	330										
pentachlorophenol	1600										
phenanthrene	330										
anthracene	330										
dibutyl phthalate	330										
fluoranthene	330	✓									

MDL
µg/Kg (soil)

- J - Estimated value.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. = MDL
- NA - Not analyzed.
- 1/ - Tentative identification.
- 2/ - On NRDC List of Priority Pollutants.

[illegible]

2/ - On NRDC List of Priority Pollutants.



STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

[illegible]

- J - Estimated value.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. = MDL
- NA - Not analyzed.
- 1/ - Tentative identification.
- 2/ - On NRDC List of Priority Pollutants.

file

24



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

June 9, 1987

Ronald H. Levine, M.D., M.P.H.
State Health Director

Mr. Christopher P. McHugh
Sybron (Ritter-Tycos)
95 Glenn Bridge Road
Arden, NC 29704

RE: Mercury Pit: Remedial Activities

Dear Mr. McHugh:

This office has reviewed your latest submittal of data from the pit excavation. Results indicate that residual levels are within 10 times Interim Primary Drinking Water Standards. We feel at this time, that additional excavations would not significantly decrease these levels.

At this time, we feel that cleanup activities are complete, however Sybron(Ritter-Tycos) has been added to the EPA ERRIS List which could result in additional investigations by our CERCLA unit.

Please call me at (919) 733-2178 should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "R. Douglas Holyfield".

R. Douglas Holyfield, Field Operations Supervisor
Solid & Hazardous Waste Management Branch
Environmental Health Section

cc: Keith Masters

24

J. L. ROGERS & CALLCOTT ENGINEERS, INC.

Consulting Engineers

Water & Sewer Design
Industrial Wastes
Grants & Permits
Hazardous Wastes
Subdivisions
Recreational Facilities

718 Lowndes Hill Rd.
Greenville, S.C. 29607
(803) 232-1556

Laboratory Service

NPDES Monitoring
Water Analysis
Monitoring Well Analysis
Treatability Studies
Leachate Analysis
Sampling & Pick-up

LABORATORY SERVICES

CLIENT: Carter-Engel
Division of Sybron Corporation
One Bridge Road
John, N.C. 28764



DATE RECEIVED : 02/06/1987

ADDITIONAL TEST REQUESTED: 04/28/1987

DATE REPORTED : 07/07/1987

SAMPLE NUMBER

48901

SAMPLE DESCRIPTION

WATERBURY CO. 1.1

ANALYSIS

PH, ALKALINITY

CHLORIDE, E

RESULTS

1.1 ppt

.001/gal

[Handwritten signature]

J. L. RIVERS & CALLCOTT ENGINEERS INC.

Consulting Engineers

Water & Sewer Design
Industrial Wastes
Grants & Permits
Hazardous Wastes
Subdivisions
Recreational Facilities

718 Lowndes Hill Rd.
Greenville, S.C. 29607
(803) 232-1556

Laboratory Service

NPDES Monitoring
Water Analysis
Monitoring Well Analysis
Treatability Studies
Leachate Analysis
Sampling & Pick-up

LABORATORY SERVICES

CLIENT: Ritter-Tycos/Div. of Sybron Corporation
Arden, N.C.

DATE RECEIVED: 03/17/1987

DATE REPORTED: 04/13/1987

36 .001 ppm

limit
.002 ppm

SAMPLE NO.	SAMPLE DESCRIPTION	E.P. TOXICITY	
		MERCURY, ug/l	
45454	F1A-2	8.6	.008 ppm
45455	F2A-2	7.1	.007 ppm
45456	F3A-2	4.8	.0048 ppm
45457	W1A-2	<1.0	
45458	W2A-2	7.5	.007
45459	W3A-2	2.8	.0028
45460	W1B-2	9.6	.009
45461	W2B-2	3.4	.0034
45462	W3B-2	2.2	.0022
45463	W1C-2	3.7	.0037
45464	W2C-2	1.5	.0015
45465	W3C-2	1.9	.0019

ppb

REPORTED BY: Sam W. Avery
Sam W. Avery, Laboratory Manager



Ritter-Tycos

SYBRON

22

April 15, 1987



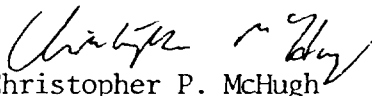
R. Douglas Holyfield
Environmental Health Section
North Carolina Dept. of Human Resources
Post Office Box 2091
Raleigh, N. C. 27602-2091

Dear Mr. Holyfield:

Further to your letter of March 10, 1987, we have now removed additional soil and taken new samples as requested by you. I enclose a copy of the test results.

Please review these results and advise as to whether any further action is required.

Sincerely,


Christopher P. McHugh
Controller

CPMcH:dw

(704) 684-4126



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

March 10, 1987

Mr. Bob Boyd
Sybron - Arden
95 Glenn Bridge Road
Arden, North Carolina 29704

Re: Remedial activities - Mercury Pit

Dear Mr. Boyd:

Per our discussion March 10, 1987 and with Mr. Jerry Rhodes of this office, a review of the data submitted March 2, 1987 indicates Mercury contamination in excess of .002 ppm (Interim Primary Drinking Water Standard). The areas of concern are the west wall and floor samples: F2A at .023 ppm, W1C at .006 ppm and W2A at .009 ppm.

In an effort to complete this project, we recommend the additional removal of soil at the west wall and floor area. Subsequent post-excavation sampling of these areas should be for extractable mercury to the .002 ppm detection limit. Any additional sampling and extractable analyses of the remaining areas to fully characterize clean-up activities would prove beneficial. Results of this sampling should be submitted by April 17, 1987.

Please call should you have any questions regarding this review.

Sincerely,

R. Douglas Holyfield, Field Operations Supervisor
Solid & Hazardous Waste Management Branch
Environmental Health Section

RDH:pgb

cc: Keith Masters

6474A

J. L. ROGERS & CALLCOTT ENGINEERS, INC.

718 Lowndes Hill Rd.
Greenville, S.C. 29607
(803) 232-1556

Consulting Engineers

Water & Sewer Design
Industrial Wastes
Grants & Permits
Hazardous Wastes
Subdivisions
Recreational Facilities

Sybron

20

Laboratory Service

NPDES Monitoring
Water Analysis
Monitoring Well Analysis
Treatability Studies
Leachate Analysis
Sampling & Pick-up

LABORATORY SERVICES

CLIENT: Ritter-Tyco/ Division of Sybron Corporation
Glen Bridge Road
Arden, N.C. 28704



DATE RECEIVED: 01/06/1987

DATE REPORTED: 02/24/1987

E.P. TOXICITY RESULTS

<u>SAMPLE NO.</u>	<u>SAMPLE DESCRIPTION</u>	<u>MERCURY, ug/l</u>
44665	F2A	23 .023
44666	F3C	<1.0 1.001
44667	N3B	<1.0 .001
44668	S1C	<1.0 .001
44669	W1C	6.4 .006
44670	W2A	8.9 .009

REPORTED BY: *Sam W. Avery*
Sam W. Avery, Laboratory Manager

NO 1002321-11
F 2-1-11

15

LAW OFFICES
OGLETREE, DEAKINS, NASH, SMOAK AND STEWART

A PARTNERSHIP INCLUDING PROFESSIONAL ASSOCIATIONS AND PROFESSIONAL CORPORATIONS

FIRST ATLANTA TOWER
TWO PEACHTREE STREET, N. W.
ATLANTA, GEORGIA 30383
(404) 588-1300

3724 NATIONAL DRIVE, SUITE ONE HUNDRED
POST OFFICE BOX 31608
RALEIGH, NORTH CAROLINA 27622
(919) 787-9700

215 STATE STREET
SCHENECTADY, NEW YORK 12305
(518) 374-4029

1200 NEW HAMPSHIRE AVENUE, N. W.
WASHINGTON, D. C. 20036
(202) 867-0855

ONE THOUSAND EAST NORTH
POST OFFICE BOX 2757
GREENVILLE, SOUTH CAROLINA 29602
(803) 242-1410

120 HEYWOOD AVENUE
POST OFFICE BOX 803
SPARTANBURG, SOUTH CAROLINA 29304
(803) 585-8216

December 11, 1986

Mr. Jerry Rhodes
Department of Human Resources
Solid and Hazardous Waste
Management Branch
225 North MacDowell Street
Raleigh, North Carolina 27602



Dear Jerry:

I appreciated the chance to talk with you on Tuesday.

As we discussed, representatives of the Sybron Corporation will be in Raleigh on December 18, 1986, to meet with you and your staff at 1:00 p.m.

At that meeting Sybron would like to discuss its plans for managing a recently discovered inactive waste area at the Arden, North Carolina facility.

If you have any questions, please call me at (919) 787-9700.

Yours truly,

OGLETREE, DEAKINS, NASH,
SMOAK AND STEWART

Jim
James M. Kuszaj

JMK/mvk

Tycos



SYBRON

January 29, 1987

Mr. Jerry Rhodes
Assistant Branch Head
Solid & Hazardous Waste Management Branch
Environmental Health Section
P.O. Box 2091
Raleigh, North Carolina 27602-2091

Re: Extension of Accumulation Time, Status Report

Dear Mr. Rhodes:

In your letter to me dated December 11, 1986 you requested that I notify your office of the shipment of the waste referred to in the requested extension letter.

This material was shipped to Groce Laboratories Inc. Greer, South Carolina January 19, 1987. Copy of the waste manifest is enclosed. Mr. Keith Masters has been given a copy as well. Thank you for the cooperation shown in dealing with this.

Sincerely,

Robert W. Boyd Jr.
Safety & Environmental Programs

CC: Keith Masters



South Carolina Department of Health and Environmental Control

2400 Ball Street, Columbia, SC 29207
Phone: (803) 756-5441
Emergency & Holidays: (803) 756-5431

13

Please print or type. (Form designed for use on nine (12-pitch) typewriter.)

Form Approved OMB No. 2000-0404 Expires 7-31-

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N C D U 0 0 2 2 2 1 7 0 3 0 0 1 7 2		Manifest Document No.		2. Page 1 of 2		Information in the shaded areas is not required by Federal law, but is by State law.					
3. Generator's Name and Mailing Address Cybron Glenn Bridge Rd., Arden, N.C. 28704						A. State Manifest Document Number							
4. Generator's Phone (704) 684-8111						B. State Generator's ID							
5. Transporter 1 Company Name Groce Laboratories Inc						C. State Transporter's ID							
6. US EPA ID Number ISICID101518171514171819						D. Transporter's Phone 803-837-1048							
7. Transporter 2 Company Name						E. State Transporter's ID							
8. US EPA ID Number						F. Transporter's Phone							
9. Designated Facility Name and Site Address Groce Laboratories Inc. P.O. Box 816 Greer, N.C. 29651						G. State Facility's ID							
10. US EPA ID Number ISICID101518171514171819						H. Facility's Phone 803-837-1048							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. Methylene Chloride, ORM-A, UN1593						2 DM		1,258		P		F0001	
b. Paint Sludge, Flammable Liquid, UN1760						9 DM		1,305		P		F10011	
c. Varsol, Flammable Liquid, UN1255						3 DM		1,317		P		D10011	
d. Mercury & Glass, ORM-B, NA2809						11 DM		3,877		P		U11511	
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above							
a. GR-00042-0004						c. GR-00042-00070							
b. GR-00042-00098						d. GR-00042-00082							
15. Special Handling Instructions and Additional Information													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and State laws. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment													
Printed/Typed Name Robert W. Boyd Jr.						Signature <i>Robert W. Boyd Jr.</i>				Month Day Year 10/11/1987			
17. Transporter 1 Acknowledgement of Receipt of Materials						Signature <i>Johnny Greer</i>				Month Day Year 10/11/1987			
18. Transporter 2 Acknowledgement of Receipt of Materials						Signature <i>Johnny Greer</i>				Month Day Year 10/11/1987			
19. Discrepancy Indication Space													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19													
Printed/Typed Name W. H. Groce						Signature W. H. Groce				Month Day Year 10/11/1987			

North Carolina Department of Health and Environmental Control

Please print type (Form designed for use on elite (12-pitch) typewriter)

Form Approved OMB No. 2000 0404 Expires 7 31 86

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. NC D U U R R R 1 7 U B 0 0 0 1 / 1 2	Manifest Document No.	22. Page 2	Information in the shaded areas is not required by Federal law, but is by State law.	
23. Generator's Name Sybron			L. State Manifest Document Number			
			M. State Generator's ID			
24. Transporter 1 Company Name Groce Laboratories Inc.		25. US EPA ID Number S C D 0 5 8 7 5 1 7 8 4		N. State Transporter's ID		
26. Transporter Company Name		27. US EPA ID Number		O. Transporter's Phone 803-877-1048		
				P. State Transporter's ID		
				Q. Transporter's Phone		
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)			29. Containers No.	Type	30. Total Quantity	31. Unit Wt./Vol.
a. III Trichloroethane, ORM-A, UN2831			9	DM	5,287	P
b. Petroleum Oil NOS, Combustable NA1270			12	DM	5,497	P
c.						
d.						
e.						
f.						
g.						
h.						
i.						
S. Additional Descriptions for Materials Listed Above			T. Handling Codes for Wastes Listed Above			
a. 09-0042-0141d			g			
b. 08-0042-0109e			h			
c. - - - - - f			i			
32. Special Handling Instructions and Additional Information						
33. Transporter Acknowledgement of Receipt of Materials			Signature		Date	
Printed/Typed Name Johnny Greer			Johnny Greer		Month Day Year 11/19/87	
34. Transporter Acknowledgement of Receipt of Materials			Signature		Date	
Printed/Typed Name					Month Day Year	
35. Discrepancy Indication Space						
<div style="display: flex; justify-content: space-between;"> • • • </div>						

7 bron
12-18-86

Business being sold $8 \times 8 \times 3\frac{1}{2}'$
~ 8×8 hole ~~blow~~ crushed glass & Mercury
sampled $1\frac{1}{2}$ intervals & outside of hole & center
↓

not registered
Lstb - Rogers + Colquitt (Greenville, S.C.)
Plan $12 \times 8 \times 6$ excavation → Enelle during shut-down
sampled sidewalls & bottom

103(c) notification to EPA (copy to be)

Manufacture Mercury, thermometers
June 1971 employee interviews does not indicate
any additional sites

plan? → .002 ppm
split samples? → per plan + background
wells? none



Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
WESTERN REGIONAL OFFICE
Building 3
Black Mountain, N.C. 28711
(704) 669-3349

September 27, 1983

TO: O. W. Strickland, Head
Solid & Hazardous Waste Mgt.

FROM: J. W. Moore, Jr.
Waste Management Specialist

RE: Analyses of Sample Taken near Storage
Area for Hazardous Waste and Empty Drums at:
Sybron/Taylor
Glenbridge Road
Arden, NC 28704
Buncombe County
EPA ID #NCD002221703
Contact: Lloyd Ducker
Safety Director



2'

While conducting a RCRA compliance inspection at Sybron/Taylor on July 28, 1983, I discovered a liquid on the ground near the hazardous waste storage area which appeared to be oil which had leaked from "empty" oil drums (new oil) stored adjacent to the hazardous waste storage area. These drums were open and stacked in a large pile with the drums lying on their sides. I collected a sample of the spilled material and sent it to Jerry Rhodes who had the lab analyze it. As can be seen on the enclosed reports this oil is a hazardous waste due to heavy metal content.

I contacted Lloyd Ducker with Sybron/Taylor on September 13, 1983 and informed him that the analysis showed that this spill is a hazardous waste spill and that he could expect a letter from the central office requiring a remedial action plan following this report. He indicated that the spill would be cleaned up by that time.

JWM/dgh



NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
INTER OFFICE MEMORANDUM

DATE 7/29/83

TO Jerry Rhodes

FROM Tim Moore



This is sample
from ground of storage
area for Sybron/Taylor
(Bene. Co.). Please ask the
lab to determine if
it is a non-hazardous
oil.

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES
N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

CHEMICAL ANALYSES - SOLID AND HAZARDOUS WASTE

Source: Sybron / TAYLOR
Address: _____
Zip: _____
County: BUNCOMBE
Report To: J. RHODES
Address: HAZ. WASTE
Zip: _____
Telephone Number: () 3-2178
Collected By: J. MOORE
Date Collected: 7-27-83 Time AM
Location of Sampling Point: _____

Remarks:

☐ Extractable Metals
☒ Total Metals

Results

Results expressed in ppm unless otherwise indicated.

Results

Arsenic

Solids, dissolved

Barium

Solids, suspended

☒ Cadmium

1.5

Solids, total

Chloride

Solids, total volatile

☒ Chromium

27

Spec. Conductivity

Color

Zinc

Copper

Endrin

Flammability

Lindane

Fluoride

Methoxychlor

Iron

Toxaphene

☒ Lead

130

2,4-D

Manganese

2,4,5-TP

Mercury

Nitrate

pH

Selenium

Silver

Date Received

Date Reported

Reported By

Laboratory Number

15367 AUG 2 83

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES
N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 -- 306 N. WILMINGTON ST., RALEIGH 27611

ORGANIC CHEMICAL ANALYSES -- PUBLIC WATER SYSTEM

Complete All Items Above Heavy Line
(See Instructions on Reverse Side)

Name of System: Sylvan / Taylor

Address: _____
ZIP: _____

County: Durham Co.

Report To: J. Rindis

Address: Home Waste
ZIP: _____

Telephone Number: () 3-2178

Collected By: J. Rindis

Date Collected: 7/29/83 Time: AM
PM

Location of Sampling Point: _____
(Address where sample was collected)

Remarks: _____

Source of Water:
() Ground () Both
() Surface () Purchased

Source of Sample:
() Distribution Tap () House Tap
() Well Tap

Type of Sample:
() Raw () Treated

Type of Treatment:
() None () Lime
() Chlorinated () Soda Ash
() Fluoridated () Polyphosphate
() Filtered () Water Softener
() Alum () Other

Type of Sample:
() Regular () Private
() Check () Special

WATER SYSTEM I.D. NUMBER (COPY FROM MAILING LABEL)

□ □ - □ □ - □ □ □

State Drinking Water Parameters (Required)

Optional Parameters (List as needed)

Results				Results			
(CHLORINATED HYDROCARBONS:)							
Endrin	mg/l	5		headspace			
Lindane	mg/l	4		Waste oil odor -			
Methoxychlor	mg/l	3		headspace indicated			
Toxaphene	mg/l	4		no highly volatile			
(CHLOROPHENOXY:)							
2,4-D	mg/l	3		compounds. GC/MS identified			
2,4,5-TP	mg/l	4		C ₁₁ -C ₁₃ hydrocarbons.			

Date Received 8/2/83 Date Reported 8-25-83 Reported By J. Rindis

Date Extracted _____ Date Analyzed _____ Laboratory Number _____

Comments: in all effluent, to full location 8-2-P3



NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
INTER OFFICE MEMORANDUM

DATE 11/18/83

TO _____

FROM Kurt Lawson

give more reports
that this spill has
been properly cleaned
up.

ROUTINE UNANNOUNCED SITE EVALUATION

271
23

A) - General

Name: Sylvan Arden Plant
 Location: Chen Bridge Road
Arden, N.C.
 Mailing Address: 95 Chen Bridge Rd.
Arden, N.C. 28704
 EPA I.D. #: NC D002221703
 Contact/Title: Bob Rog Bankford, Jr.
Stenhardt's Lab Inc.

Inspection Date: 3-23-87
 Inspection Category: _____
 RCRA Notifier as:
 Generator: ✓
 Transporter: _____
 TSD: _____
 Inspector(s): Keith M. Martin
 Other: _____

Water Supply (if well(s) give approximate location): City Water - No wells on site
 Air/water discharge permit(s), Municipal/Private sewer system(s): See Comments
Arden MSD - Sewer Discharge Permit To

B) - Disposal of wastes on-site/off-site; Where, When, What type, Amount, frequency, How long, and By whom (transporters, facilities, etc.): Yes - Mercury - This is being handled under CERCLA

C) - Evidence of improper on-site treatment/storage/disposal/release: _____
 approximate location, type, amount, frequency, length of time, etc.: See Comment Above yes, _____ no. Give

D) - Inspection Schedule and Log
 (*) denotes TSD requirements
 (1) Are inspections conducted: Yes
 (2) Written inspection schedule: N/A
 (3) Inspection log: Yes
 Daily - Loading and unloading of areas subject to spills: N/A
 - discharge control/monitoring equipment for tanks, 2' freeboard or containment: No
 - incinerator system, thermal treatment equipment (leaks, spills, emissions, alarms): No
 - chem/phys/bio. treatment and monitoring equipment: No
 - freeboard level of surface impoundments: No
 - other: _____

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES
SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH
P.O. BOX 2091 RALEIGH, NORTH CAROLINA 27602-2091



306 N. WILMINGTON ST.
INSPECTION REPORT

EPA ID.# : NCV002221703 FACILITY NAME : Sybron Arden Plant

ADDRESS : Glen Bridge Rd. CITY : Arden, N.C.

DATE OF INITIAL INSPECTION : 12 8 86 STAFF ID #: 01 DOCKET #: 87-319 *Follow-up on*

RESPONSIBLE AGENCY: (S) = STATE: E = EPA: X = OVERSIGHT:
B = STATE CONTRACTOR: E = EPA CONTRACTOR:

TYPE OF EVALUATION: 5 1=CEI 8=WITHDRAWAL CANDIDATE
2=SAMPLING 9=CLOSED FACILITY
3=RECORD REVIEW 10=GENERAL (LOIS FOR EPA)
4=CME 11=CASE DEVELOPMENT
5=FOLLOW UP 12=CORRECTIVE ACTION
6=CITIZEN COMPLAINT
7=PART B. 80=INFORMAL MEETING

DATE OF INSPECTION: 1-29-87

CLASS	AREA OF EVALUATION							
	GW:	C/CP	FIN:	PART B:	OMPL.SCH:	INT:	OT:	CA:
I								
II						0	0	

ENTER O, X, or Z IN THE CLASS I ROW.
MAKE ENTRY IN CLASS II ROW ONLY IF CLASS II VIOLATIONS EXIST.

ENFORCEMENT ACTIONS:									
CLASS	VIOLATION	CODE	DATE ACTION TAKEN	COMPLIANCE SCHED.	DATE ACTUAL	PENALTY ASSESSED	RESPONSIBLE AGENCY	COLLECTED	ID
II		03	1-13-87	1-26-87	1-29-87		5		01

02=3007 INFO REQUEST 05=FINAL ADMIN. ORDER
03=NOV WARNING LETTER 10=INFORMAL
04=ADMIN. COMPLAINT

STATUS OF HANDLER: IN COMPLIANCE WITH SCHEDULE IN ORDER: ✓ YES: NO:

DATE STATUS EVALUATED: 1-29-87

COMMENTS: Company is in compliance -

GENERATOR INSPECTION FORM - PART 262

Sybron Arden Plant NC D002221703 Lencombe
 Name of Site EPA I.D. County
Chen Bridge Rd., Arden, N.C. 1-29-87 [Signature]
 Location Inspection Date Signature of Inspector(s)
in compliance [Signature]
 Compliance Date Signature of Facility Contact

An inspection of your facility has been made this date and you are notified of the violations, if any, marked below with a cross (X).

SUBPART A - GENERAL

1. Hazardous Waste Determination (262.11)

- ☒ Subpart D waste (b)
☒ Subpart C waste (c)(1)(2)

2. EPA Identification Numbers

- ☒ EPA generator number (a)
☒ EPA transporter/facility (c)

SUBPART B - THE MANIFEST

3. General Requirements (262.20)

- ☒ proper manifest (a)
☒ permitted facility (b)

4. Required Information (262.21)

- ☒ document number (a)(1)
☒ generator identification (a)(2)
☒ transporter identification (a)(3)
☒ facility identification (a)(4)
☒ D.G.T. description (a)(5)
☒ total quantity (a)(6)
☒ certification (b)

5. Number of Copies (262.22)

- ☒ minimum number

6. Use of the Manifest (262.23)

- ☒ generator handwritten signature (a)(1)
☒ transporter signature/date (a)(2)
☒ retain copy (a)(3)
☒ copies to transporter (b)

SUBPART C - PRE-TRANSPORT REQUIREMENTS

7. Packaging (262.30)

- ☐ D.O.T. compliance

8. Labeling (262.31)

- ☐ D.O.T. compliance

9. Marking (262.32)

- ☐ D.O.T. compliance (a)
☐ "HAZARDOUS WASTE" label (b)

10. Placarding (262.33)

- ☐ D.O.T. compliance

11. Accumulation Time (262.34)

- ☒ Subpart I; J (a)(1)
☒ accumulation date (a)(2)
☐ "Hazardous Waste" (a)(3)
☐ Subpart C; D (a)(4)*
☒ personnel training (a)(4)*

*Cite specific violations of 40 CFR 265 under remarks

SUBPART D - RECORDKEEPING AND REPORTING

12. Recordkeeping (262.40)

- ☐ manifest retention (a)
☐ annual/exception report (b)
☐ test/waste analysis (c)

13. Annual Reporting (262.41)

- ☐ submitted (a)(1-6)
☐ submitted (b)

14. Exception Reporting (262.42)

- ☐ transporter contact (a)
☐ exception report (b)(1)(2)

REMARKS:

Company has remove some of the soil contaminated with mercury, that more is to be removed - CERCLA Group has been contacted regarding this -

Company has been sold and will be moving out of state and to the new location in N.C. (New Name: Tydos Instruments Inc.)

CONTAINER/TANK INSPECTION FORM - PART 265

Name of Site

EPA I.D.

Inspection Date

SUBPART I - USE AND MANAGEMENT OF CONTAINERS

1. Condition Of Containers (265.171)

- ☒ leakage
☒ past leakage (evidence)
☒ severe rusting
☒ structural defect

2. Compatibility Of Waste With Containers (265.172)

- ☒ visual evidence of noncompliance
(leakage, corrosion)

3. Management of Containers (265.173)

- ☒ closed (a)
☒ improper handling or storage (b)

4. Inspections (265.174)

- ☐ weekly (minimum)

5. Special Requirements For Ignitable or Reactive Waste (265.176)

- ☒ 15m (50 ft)

6. Special Requirements For Incompatible Waste (265.177)

- ☒ mixing (a)
☒ unwashed container (b)
☒ separation (c)

SUBPART J - TANKS

1. General Operating Requirements (265.192)

- ☐ compatibility (a)(b)
☐ uncovered tank precautions (c)
☐ overflow prevention (d)

2. Waste Analysis and Trial Tests (265.193)*

- *Section not applicable to a generator only
☐ waste analysis/trial test

3. Inspections (265.194)

- ☐ discharge control equipment (a)(1)
☐ monitoring equipment (a)(2)
☐ waste level (a)(3)
☐ construction material (a)(4)
☐ surrounding area (a)(5)
☐ assessment schedule/procedures (b)

4. Closure (265.197)

- ☐ plan on-site

5. Special Requirements For Ignitable Or Reactive Waste (265.198)

- ☐ properly stored (a)(1)(2)(3)
☐ buffer requirements (b)

6. Special Requirements For Incompatible Wastes (265.199)

- ☐ properly stored (a)
☐ tank washed (b)

REMARKS:

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES

SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH

P.O. BOX 2091 RALEIGH, NORTH CAROLINA 27602-2091

306 N. WILMINGTON ST.

INSPECTION REPORT

EPA ID.# : NC0002221703 FACILITY NAME : Sybron Anden Plant

ADDRESS : Clen Bridge Rd. CITY : Anden, N.C.

DATE OF INITIAL INSPECTION : 12-8-86 STAFF ID # : 01 DOCKET # : 87-319

RESPONSIBLE AGENCY : (S) STATE : E = EPA : X = OVERSIGHT :
B = STATE CONTRACTOR : E = EPA CONTRACTOR :

TYPE OF EVALUATION:

- 1=CEI
- 2=SAMPLING
- 3=RECORD REVIEW
- 4=CME
- 5=FOLLOW UP
- 6=CITIZEN COMPLAINT
- 7=PART B.

- 8=WITHDRAWAL CANDIDATE
- 9=CLOSED FACILITY
- 10=GENERAL (LOIS FOR EPA)
- 11=CASE DEVELOPMENT
- 12=CORRECTIVE ACTION

80=INFORMAL MEETING JAN 6 1987

DATE OF INSPECTION : _____

CLASS	GL	C/CP	FIN:	PART B:	OMPL.SCH:	MA:	OT:	CARD
I								
II							X	

ENTER O, X, or Z IN THE CLASS I ROW.
MAKE ENTRY IN CLASS II ROW ONLY IF CLASS II VIOLATIONS EXIST.

ENFORCEMENT ACTIONS:

CLASS	VIOLATION	CODE	DATE ACTION		COMPLIANCES DATE		PENALTY		RESPONSIBLE	
			TAKEN	SCHED.	ACTUAL	ASSESSED	COLLECTED	AGENCY	ID	
II	262.34(a)(2) 262.34(b)	03	7-28-86	7-28-86						

02=3007 INFO REQUEST
03=NOV WARNING LETTER
04=ADMIN. COMPLAINT
05=FINAL ADMIN. ORDER
10=INFORMAL

STATUS OF HANDLER: IN COMPLIANCE WITH SCHEDULE IN ORDER: _____ YES: _____ NO:

DATE STATUS EVALUATED: _____

COMMENTS : UNANNOUNCED

UNANNOUNCED Insp.

GENERATOR INSPECTION FORM - PART 262

Name of Site

Sybrus Anden Plant

EPA I.D.

NCV002221703

County

Location

Chen Bridge Rd, Anden, N.C.

Inspection Date

12-8-86

Signature of Inspector(s)

Compliance Date

Jan 12 1987

Signature of Facility Contact

An inspection of your facility has been made this date and you are notified of the violations, if any, marked below with a cross (X).

SUBPART A - GENERAL

1. Hazardous Waste Determination (262.11)

- C Subpart D waste (b)
C Subpart C waste (c)(1)(2)

2. EPA Identification Numbers

- C EPA generator number (a)
C EPA transporter/facility (c)

SUBPART B - THE MANIFEST

3. General Requirements (262.20)

- C proper manifest (a)
C permitted facility (b)

4. Required Information (262.21)

- C document number (a)(1)
C generator identification (a)(2)
C transporter identification (a)(3)
C facility identification (a)(4)
C D.O.T. description (a)(5)
C total quantity (a)(6)
C certification (b)

5. Number of Copies (262.22)

- C minimum number

6. Use of the Manifest (262.23)

- C generator handwritten signature (a)(1)
C transporter signature/date (a)(2)
C retain copy (a)(3)
C copies to transporter (b)

SUBPART C - PRE-TRANSPORT REQUIREMENTS

7. Packaging (262.30)

- C D.O.T. compliance

8. Labeling (262.31)

- C D.O.T. compliance

9. Marking (262.32)

- C D.O.T. compliance (a)
C "HAZARDOUS WASTE" label (b)

10. Placarding (262.33)

- C D.O.T. compliance

11. Accumulation Time (262.34)

- C Subpart I; J (a)(1)
X accumulation date (a)(2) ✓
C "Hazardous Waste" (a)(3)
C Subpart C; D (a)(4)*
X personnel training (a)(4)* ✓

*Cite specific violations of 40 CFR 265 under remarks

SUBPART D - RECORDKEEPING AND REPORTING

12. Recordkeeping (262.40)

- C manifest retention (a)
C annual/exception report (b)
C test/waste analysis (c)

13. Annual Reporting (262.41)

C submitted (a)(1-6)
C submitted (b)

14. Exception Reporting (262.42)

C transporter contact (a)
C exception report (b)(1)(2)

REMARKS:

✓ 262.34(A)(2) - Three (3) drums with no

Accumulation date.

✓ 262.34(B) - 8 drums with an accumulation
 start date of 8-28-86 - Over 90 days
 on site -

✓ 265.16(d)(2) Provide job descriptions that describe
 the hazardous waste duties of employees -
 Not their routine job description.

Company disposed of some crushed glass and
 Mercury on this property in 1971 - Material
 is buried in a 6' x 6' x 3 1/2' pit under a
 side walk - Clean up plan is to be
 submitted to Bill Meyer within two weeks.

CONTAINER/TANK INSPECTION FORM - PART 265

Name of Site

EPA I.D.

Inspection Date

SUBPART I - USE AND MANAGEMENT OF CONTAINERS

1. Condition Of Containers (265.171)

- ☒ leakage
☒ past leakage (evidence)
☒ severe rusting
☒ structural defect

2. Compatibility Of Waste With Containers (265.172)

- ☒ visual evidence of noncompliance
(leakage, corrosion)

3. Management of Containers (265.173)

- ☒ closed (a)
☒ improper handling or storage (b)

4. Inspections (265.174)

- ☒ weekly (minimum)

5. Special Requirements For Ignitable or Reactive Waste (265.176)

- ☒ 15m (50 ft)

6. Special Requirements For Incompatible Waste (265.177)

- ☒ mixing (a)
☒ unwashed container (b)
☒ separation (c)

SUBPART J - TANKS

1. General Operating Requirements (265.192)

- ☐ compatibility (a)(b)
☐ uncovered tank precautions (c)
☐ overflow prevention (d)

2. Waste Analysis and Trial Tests (265.193)*

- *Section not applicable to a generator only
☐ waste analysis/trial test

3. Inspections (265.194)

- ☐ discharge control equipment (a)(1)
☐ monitoring equipment (a)(2)
☐ waste level (a)(3)
☐ construction material (a)(4)
☐ surrounding area (a)(5)
☐ assessment schedule/procedures (b)

4. Closure (265.197)

- ☐ plan on-site

5. Special Requirements For Ignitable Or Reactive Waste (265.198)

- ☐ properly stored (a)(1)(2)(3)
☐ buffer requirements (b)

6. Special Requirements For Incompatible Wastes (265.199)

- ☐ properly stored (a)
☐ tank washed (b)

REMARKS:

Facility Info.

Sybron Arden Plant

Old Bridge Rd., Arden, N.C.

NC 00222/703

Facility Contact

Robert Boyd, Safety & Env. program Supv.

Survey Participants

Robert Boyd

Keith Masters

Date of Survey

12-8-86

Purpose of Survey

Annual ACHA Insp.

Facility Description

This Company manufactures medical, and scientific instruments and thermometers. Their waste streams are solvents and waste mercury. Waste are transported and disposed of by Groc Lake in Greer, S.C.

Site efficiency
262.34 (A2) - Three checks in storage
area with the documentation about date

262.34 (6) - 8 items with documentation
about date of 8-28-86 - over 90 days
on site

262.16 (A2) - 56 samples - did not
include fragments about dates

See Comments on Generator for Comments
on 1971 -
1971 - Mercury dropped on site

Compliance Schedule
1-12-87

RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name Sybron / ARDEN PLANT

City ARDEN State NC

Facility I.D. Number NC D002221703

Type of Facility: Generator X Transporter TSD

I. RCRA APPLICABILITY	yes	no
Does the facility have RCRA interim status?	—	<u>X</u>
Did the facility ever have RCRA interim status?	—	<u>X</u>
Does the facility have a final or post-closure permit? If so, date issued <u> </u>	—	<u>X</u>
Is the facility a non-notifier that has been identified by States or EPA?	—	<u>X</u>
Is the facility a known or possible protective filer?	—	<u>X</u>

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS

Is the facility owned by an entity that has filed for bankruptcy under federal laws (Chapter 7 or 11) or State laws?

If yes, what has it filed under?
Chapter 7 Chapter 11 Other

III. ENFORCEMENT

RCRA Status

Has the facility lost authorization to operate via LOIS, 3005(c) permit denial, 3008(h) IS termination, 3005(d) permit revocation?

Has the facility's Interim Status been terminated via another mechanism (i.e. administrative termination)?

CERCLA Status

What CERCLA financed remedial or removal activities have been initiated at the site? (RI/FS, RD/RA, O&M, forward planning, and removal; does not include enforcement or PA/SI activities)

Enforcement Status

YES NO

In general, would you characterize the facility as demonstrating an unwillingness to undertake corrective action based on prior State, CERCLA or RCRA actions? _____

If yes, please describe and cite the authorities exercised.

Is the owner/operator a party to any enforcement action at the site? _____

If not, why not?

Are any PRPs (including owner/operators) undertaking remedial studies or action in response to CERCLA enforcement authorities? What is the extent/type of work that has been completed (RI/FS, etc.) and who (generators, owner/operator, etc.) is conducting the work?